Modern LITHOGRAPHY

EBRUARY - 1955 - VOLUME 23 - NUMBER 2

C. V. Fry, art director at Brown & Bigelow, takes a look at some of company's many calendars for 1955, which totaled 60 million. (See page 5)

In this issue

Color By Overprinting • Dampener Covers
B & B Makes Calendars • Sell Color Offset

Permanent Green 67P

Senelith Inks

Were the first lithographic inks

made from dyestuffs

treated with sodium tungstate

for better sunfastness

and are still leading

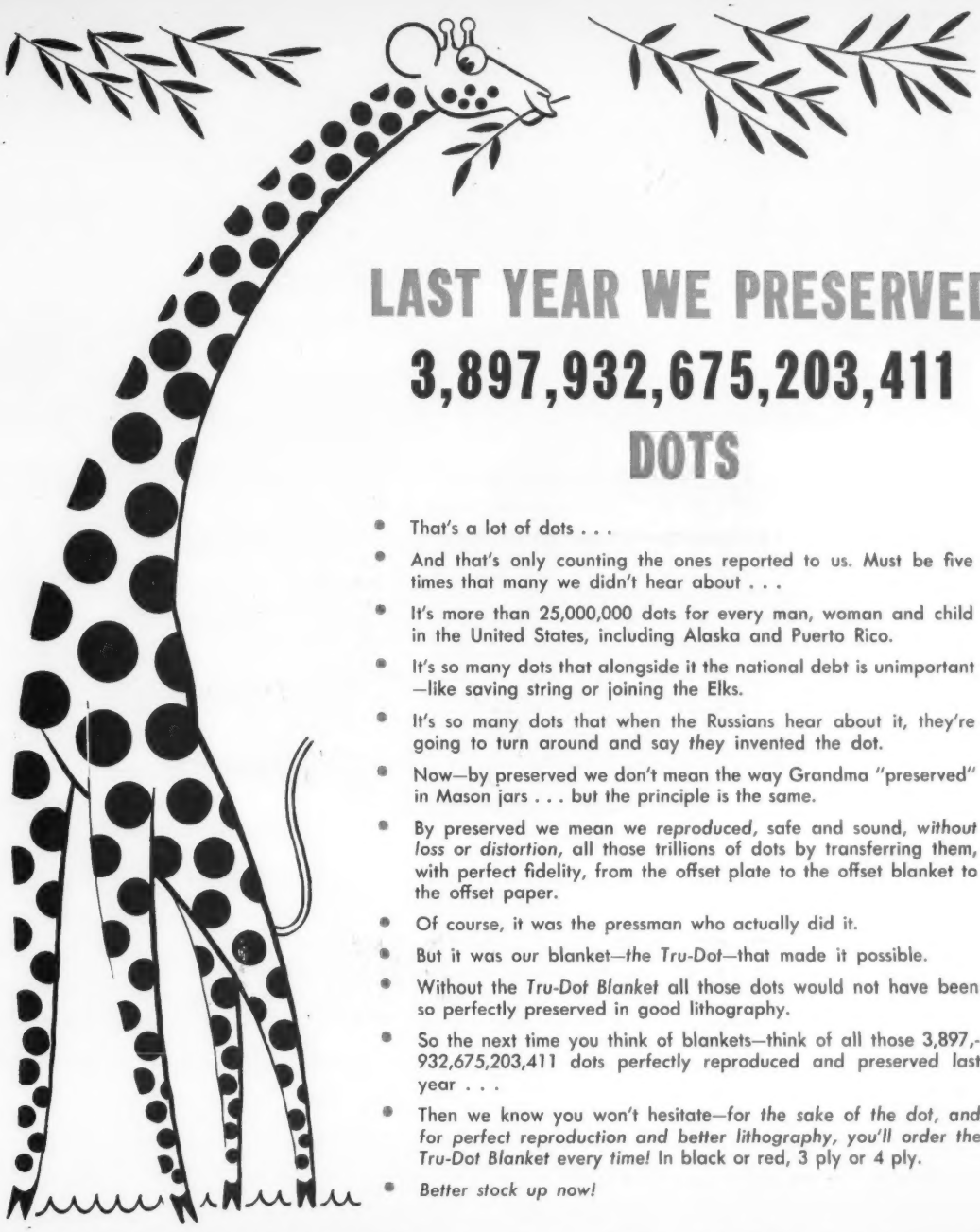
with their outstanding resistance properties

Our booklet "Inks, Lithographic and Printing" may be obtained on request

The Senefelder Company, Inc.

"Everything for Lithography"

32-34 Greene Street New York 13, N.Y.



LAST YEAR WE PRESERVED

3,897,932,675,203,411

DOTS

- That's a lot of dots . . .
- And that's only counting the ones reported to us. Must be five times that many we didn't hear about . . .
- It's more than 25,000,000 dots for every man, woman and child in the United States, including Alaska and Puerto Rico.
- It's so many dots that alongside it the national debt is unimportant —like saving string or joining the Elks.
- It's so many dots that when the Russians hear about it, they're going to turn around and say *they* invented the dot.
- Now—by preserved we don't mean the way Grandma "preserved" in Mason jars . . . but the principle is the same.
- By preserved we mean we *reproduced*, safe and sound, *without loss or distortion*, all those trillions of dots by transferring them, with perfect fidelity, from the offset plate to the offset blanket to the offset paper.
- Of course, it was the pressman who actually did it.
- But it was our blanket—*the Tru-Dot*—that made it possible.
- Without the *Tru-Dot Blanket* all those dots would not have been so perfectly preserved in good lithography.
- So the next time you think of blankets—think of all those 3,897,-932,675,203,411 dots perfectly reproduced and preserved last year . . .
- Then we know you won't hesitate—*for the sake of the dot, and for perfect reproduction and better lithography, you'll order the Tru-Dot Blanket every time!* In black or red, 3 ply or 4 ply.
- *Better stock up now!*

ROBERTS & PORTER

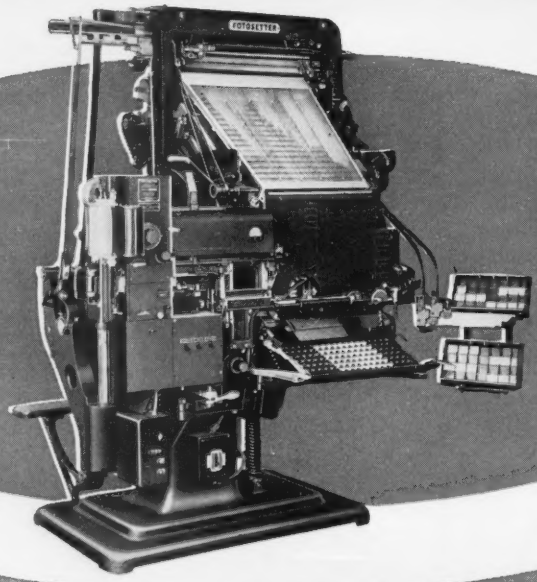
INCORPORATED

General Offices: 555 West Adams St., CHICAGO

NEW YORK 622-626 Greenwich	CINCINNATI 229 E. 6th St.	DETROIT 1025 Brush St.	LOS ANGELES 344 N. Vermont Ave.	SAN FRANCISCO 1185 Howard St.
BOSTON 88 Broad St.	KANSAS CITY 1434 Wyandotte St.	BALTIMORE 5 South Gay St.	CLEVELAND 1825 East 18th St.	PHILADELPHIA 1205 Hamilton St.

ALL ORDERS SHIPPED FROM THE R & P OFFICE NEAREST TO DESTINATION

Found at Intertype:
A missing link for lithographers



FOTOSETTER

The Intertype Fotosetter links quantity to quality—high output to flawless reproduction—low cost to great typographic freedom. It appeals to both the realistic businessman and the painstaking craftsman.

To the businessman a Fotosetter means:

1. Makeup time is slashed using either type on film or photographic paper.
2. Arrangement of copy blocks, headings and illustrations is greatly simplified.
3. Uneven measures, angled or odd-shaped type blocks are easily assembled.
4. Proofing and camera operations are eliminated.
5. White space costs almost nothing.
6. No more expensive handsetting, particularly for sizes above 14 points. The Fotosetter handles up to 36 points *on the keyboard.*
7. Space and money, tied up in storage of metal forms, are released by the Fotosetter.
8. Far fewer matrices and magazines are needed.

To the craftsman a Fotosetter means:

1. Characters in perfect alignment.
2. Uniform density or color.
3. Full kerning.
4. No smudges or fuzzy ink squeeze impressions.
5. No broken type. The Fotosetter uses light, not lead.
6. Perfect enlargements up to any size, *without retouching.*

In a Fotosetter future, many of today's litho problems become things of the past.

If it isn't made by Intertype, it isn't a Fotosetter

INTERTYPE CORPORATION

360 Furman Street, Brooklyn Chicago, San Francisco, Los Angeles, New Orleans, Boston
In Canada: Toronto Type Foundry Co. Ltd. Toronto, Montreal, Winnipeg, Vancouver, Halifax

Intertype and Fotosetter are registered trademarks • Fotosetter Garamond and Futura families

Modern LITHOGRAPHY

THE COVER

C. V. Fry, art director of Brown & Bigelow Co., views a mass of 1955 calendars made by the company, which annually produces 60 million of them, a high percentage by offset. Turn to page 37 for the story of B. & B., and a picture sequence showing how the company makes a calendar for Pan American World Airways.

WAYNE E. DORLAND
Editor

RALPH E. DORLAND
Advertising Manager

CHICAGO OFFICE
333 North Michigan Ave.

Member of... LITHOGRAPHIC TECHNICAL FOUNDATION

AUDITED PAID CIRCULATION ABC

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MODERN LITHOGRAPHY
VOLUME 23, NUMBER 2 **FEBRUARY, 1955**

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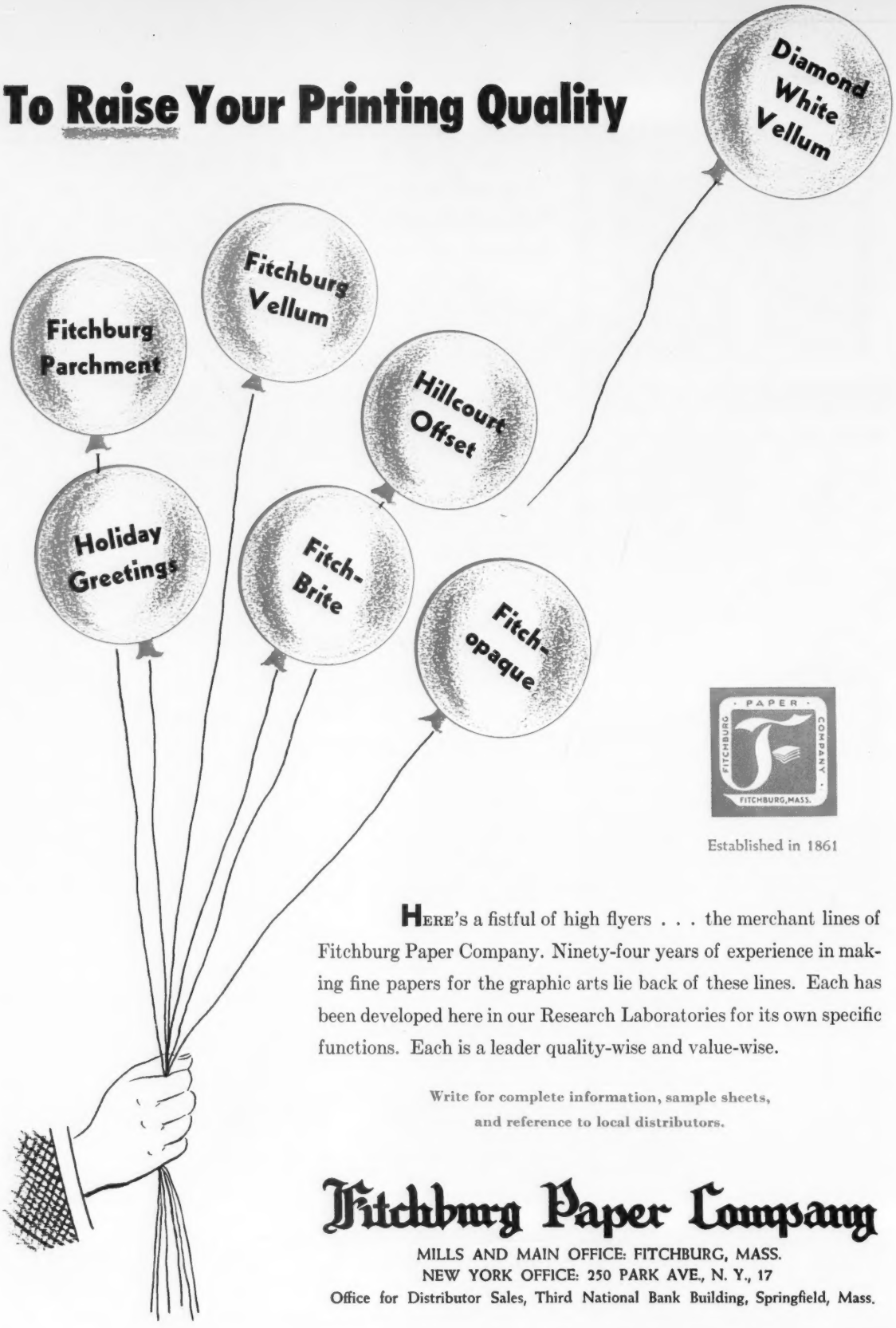
To Raise Your Printing Quality



FITCHBURG PAPER COMPANY · FITCHBURG, MASS.

Established in 1861

HERE's a fistful of high flyers . . . the merchant lines of Fitchburg Paper Company. Ninety-four years of experience in making fine papers for the graphic arts lie back of these lines. Each has been developed here in our Research Laboratories for its own specific functions. Each is a leader quality-wise and value-wise.

Write for complete information, sample sheets, and reference to local distributors.

Fitchburg Paper Company

MILLS AND MAIN OFFICE: FITCHBURG, MASS.
NEW YORK OFFICE: 250 PARK AVE., N. Y., 17
Office for Distributor Sales, Third National Bank Building, Springfield, Mass.

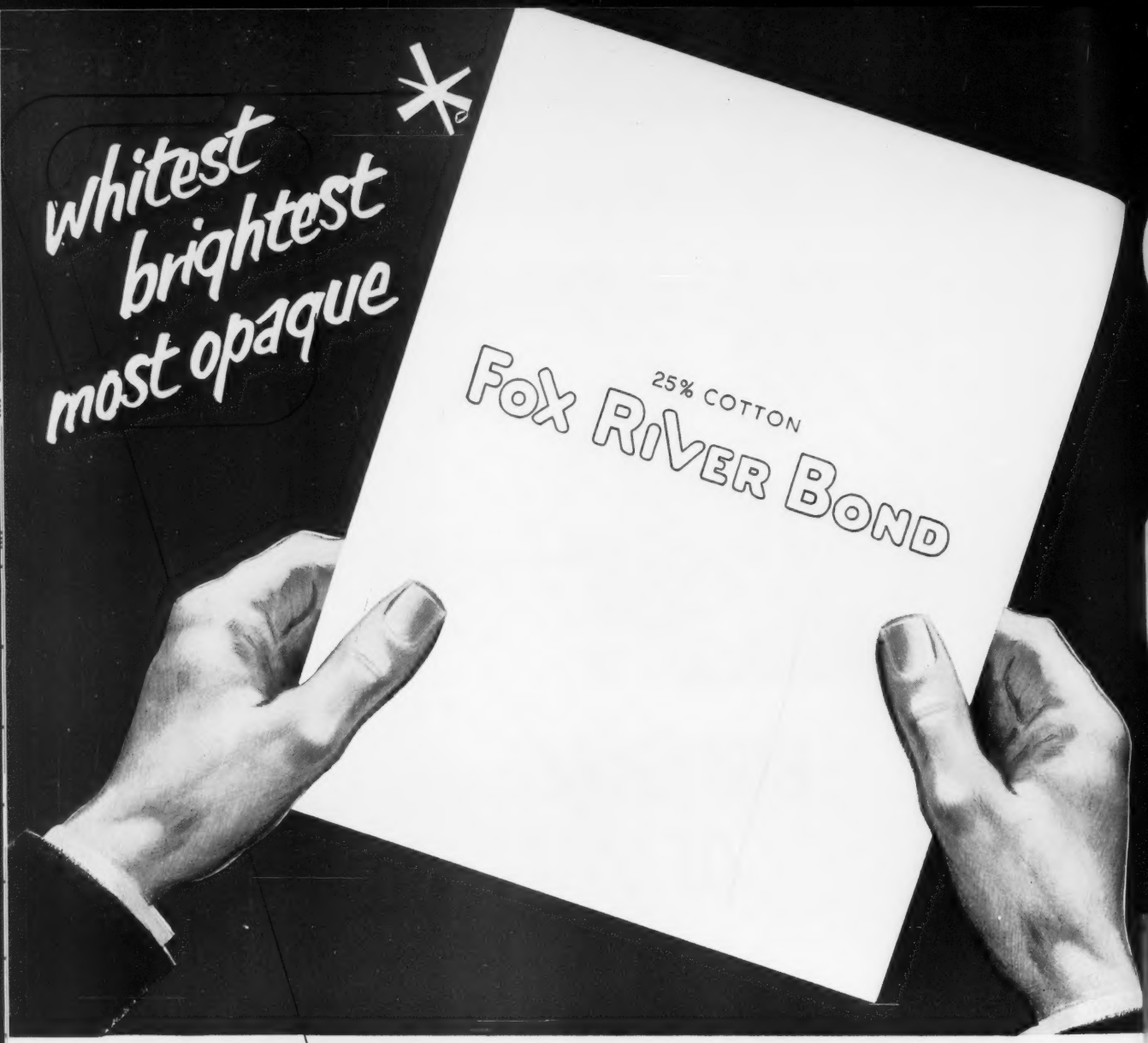
BIRTHPLACE OF LIVING COLOR!

This **S&V** *lab is the place where color comes to life! Backed by years of experience, primed by careful research, and aided by modern science, skilled* **S&V** *technicians recreate every hue of the spectrum and reproduce every color known to man. Translated into* **S&V** *inks, these high-powered colors find their way to the packaging industry, publication and job printers all over the world. There's an* **S&V** *colored ink that perfectly suits your printing purpose, whatever it may be. So call on* **S&V** *the next time you want to put more life into any printing job.*

Sinclair and Valentine Co.

***Main Office and Factory:* 611 West 129th St., New York 27, N. Y.**

OVER 35 BRANCHES PROVIDE SERVICE FROM COAST TO COAST



and you can *prove* it

with the Fox River

eye test kit

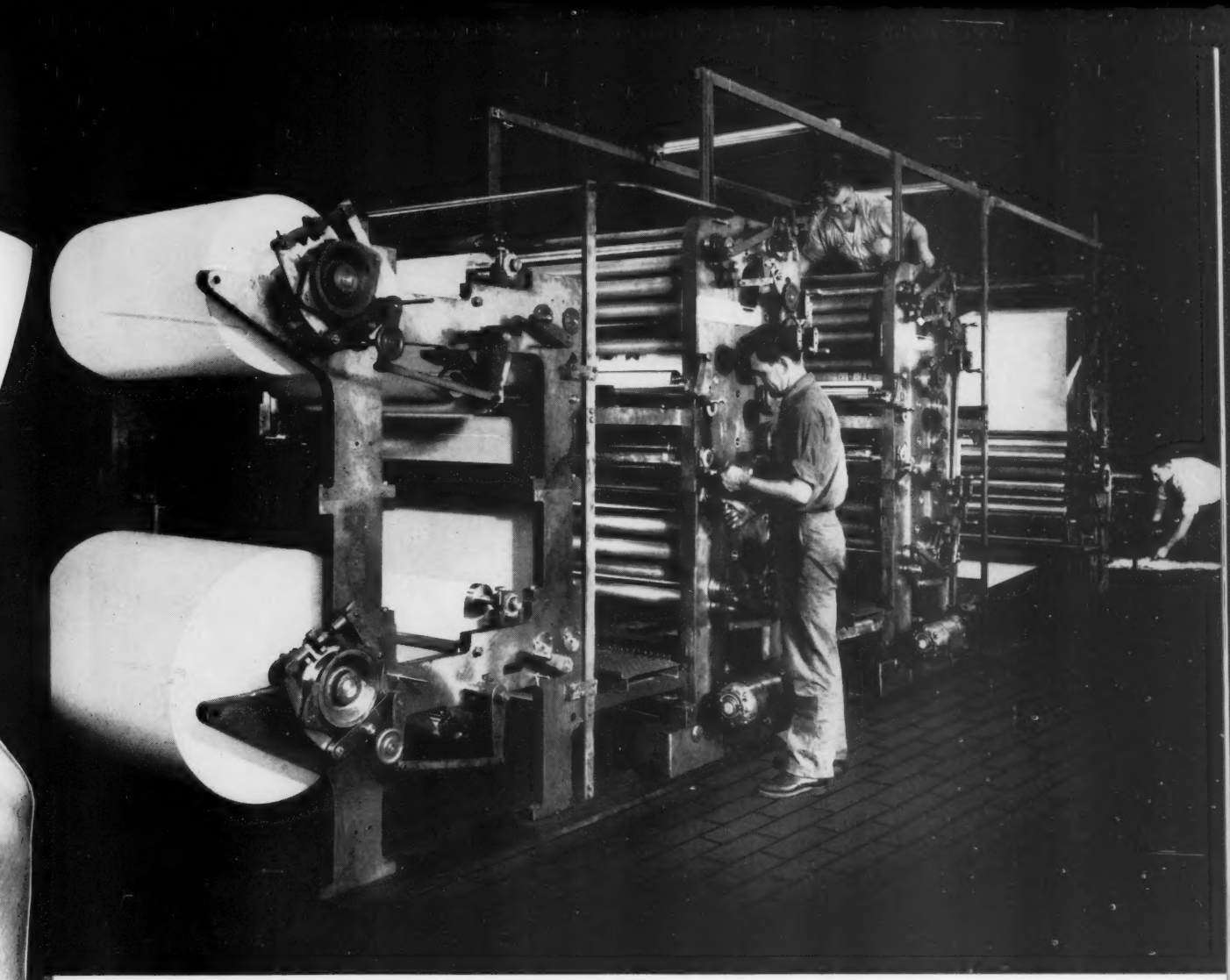
Show your customers and prospects (and yourself!) how much better their letterheads and envelopes will look when YOU print them on Fox River Bond. The Eye Test Kit lets you make the forceful, convenient demonstration which proves that Fox River paper, like your printing, is the FINEST!

Where your printing calls for other grades, remember these complementary papers:

FOX RIVER OPAQUE • FOX RIVER LEDGER
FOX RIVER ONION SKIN • FOX RIVER OPAQUE ONION SKIN

FOX RIVER PAPER CORPORATION *Appleton, Wisconsin*

If you have misplaced, or did not receive your Eye Test Kit . . . call your Fox River merchant, or write to the mill.



Books, magazines, broadsides, house organs, catalogs—Mercury Litho puts them all on an ATF Webendorfer like the one shown here.

The press that made too much work for itself

Here's how one web-fed ATF Webendorfer Press brought in so much new business for a New York lithographer that he had to add another.

Mercury Lithographing Corporation installed their original web-fed publication press to speed production of circulars that their medium-sized sheet-fed presses couldn't turn out fast enough.

This press is capable of turning out up to 12,000 16-page tabloid signatures an hour.

With that kind of production, cost per copy hit rock bottom. This gave Mercury such a selling edge that their increased business not only kept the first ATF press busy full-time—it forced them to install another!

"Today," says Henry Levine, Mercury's president, "we're running books, magazines, broadsides, house organs and catalogs on our ATF web press. And we're keeping our original sheet-fed presses busy on shorter runs."

If you're interested in bringing in or turning out more work than your present equipment can handle, write for ATF's free fact-filled booklet on Webendorfer Publication Presses—American Type Founders, Mt. Vernon Division, *a subsidiary of Daystrom, Inc.*, Mount Vernon, N. Y. W.4.1

ATF

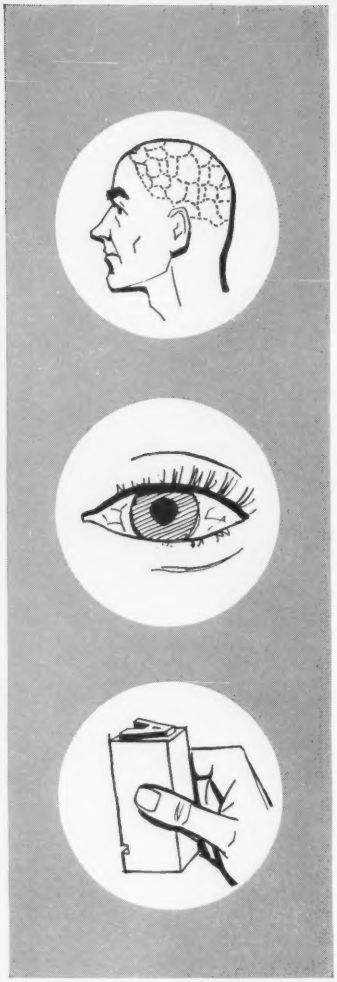
BETTER, MORE PROFITABLE PRINTING FROM THE WIDEST LINE OF PROCESSES

Gravure..Letterpress..Offset..Flexographic

IDEAS

SELL

PRINTING



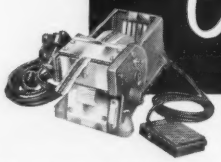
Here's the "smart way" to attract attention to any man's product and make him an eager buyer of printed point-of-purchase advertising. KLEEN-STIK—the moistureless, self-sticking adhesive—does just that! It's a sure way to make dealers want and use many types of P.O.P. materials that help advertisers get the edge over competition.

Suggest KLEEN-STIK's unique advantages . . . show the KLEEN-STIK IDEA KIT of practical samples . . . and see how easy it is to get extra business with KLEEN-STIK!

. . . and

KLEEN-STIK® creates IDEAS

- **SLIDE-STIK** "Pops up" product in lifelike 3rd dimension!
- **FACE-STIK** For easy, inexpensive face-to-the-glass displays.
- **FLANGES** Position your sales message at right angles to store traffic!
- **LABELS** Individual split or roll labels for hand feed or automatic, high-speed application. For industrial use or point of sale!

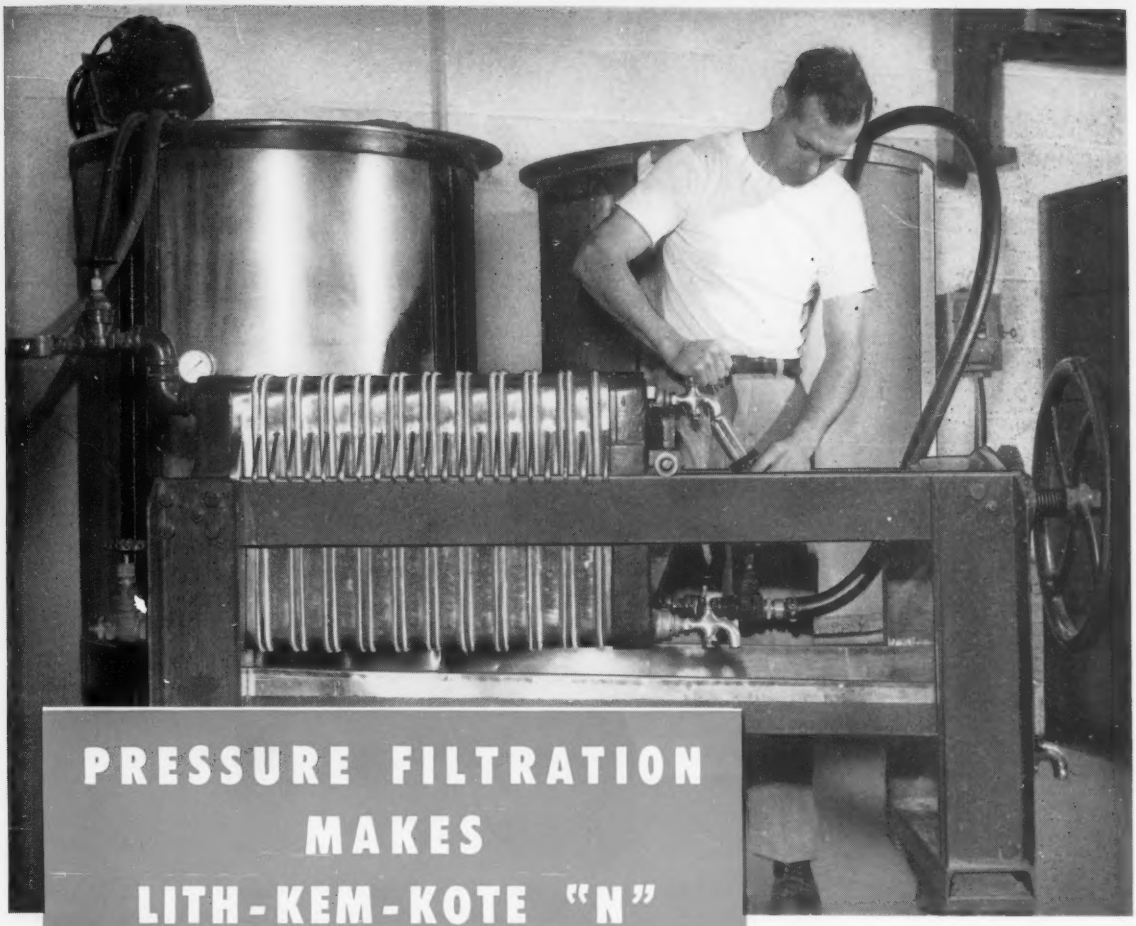


Write TODAY for your FREE IDEA KIT — loaded with business bait!

KLEEN-STIK PRODUCTS, INC.

225 N. MICHIGAN AVE. • CHICAGO 1, ILL.

Pioneers in Pressure Sensitives to the Trade



PRESSURE FILTRATION MAKES LITH-KEM-KOTE "N" *SMOOTH AS SILK*

To get a good surface plate, the coating must be smooth, clean, easy to spread, and above all it must adhere to the grained surface under all press conditions.

LITH-KEM-KOTE "N" is such a coating because it is made under exacting controls and laboratory tested before it is shipped.

Lithographers who use LITH-KEM-KOTE "N" every day report that it has these advantages:

- ★ Smoother coating under all whirler and grain conditions.
- ★ Humidity problems cut to a minimum.
- ★ Less ready to use coating needed per plate (1½-2 oz. for a 17 x 22)
- ★ Can be used right from the bottle or diluted as much as two parts of tap water to three parts LITH-KEM-KOTE "N" depending on grain and whirler speed.
- ★ Long runs of matchless reproduction either line or halftone.
- ★ Long shelf life.
- ★ Added economy (see prices below)

PRICES

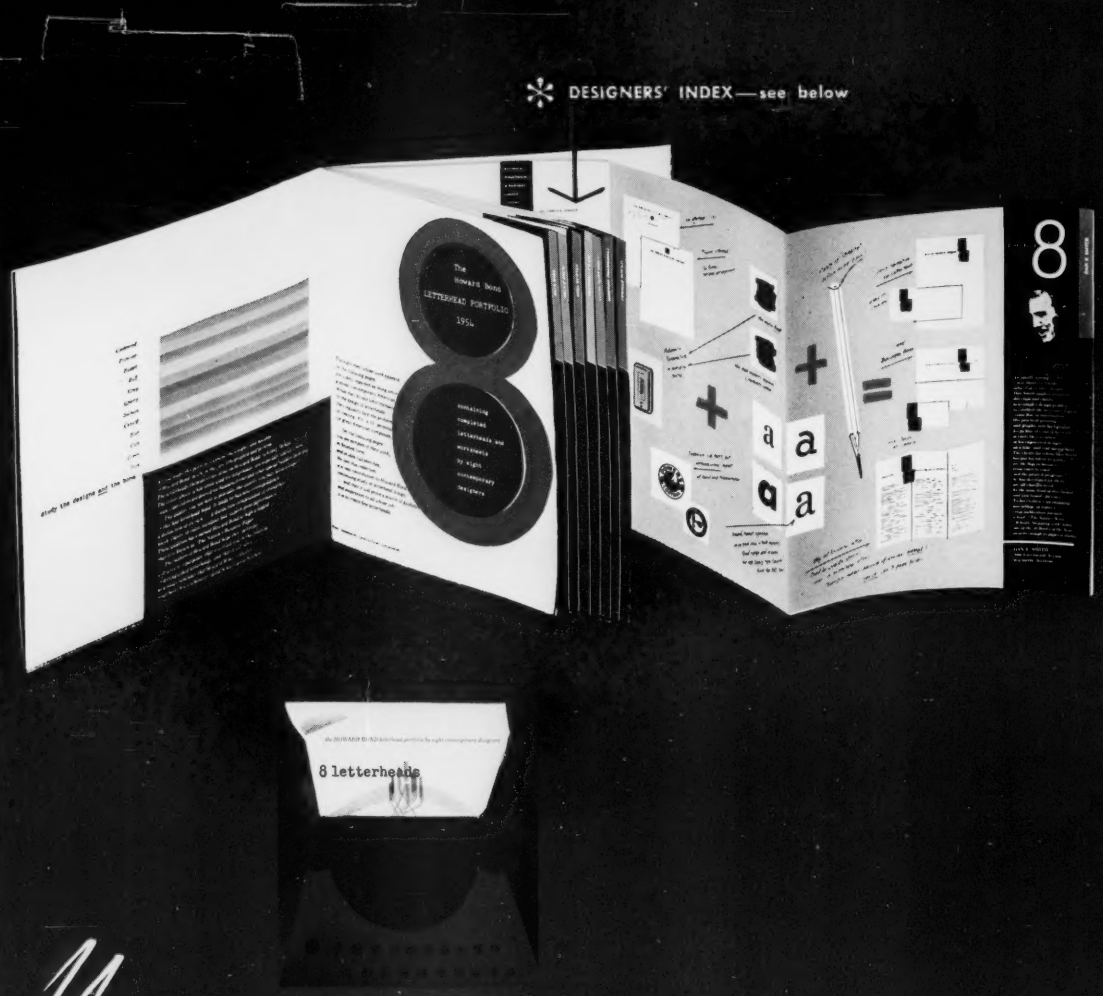
1 quart	**$1.75**
1 gallon	**6.50**
4 gallons, per gallon	**6.25**
12 gallons, per gallon	**6.00**

Prices slightly higher on West Coast

There's a new LITH-KEM-KO Catalog ready. Send for your copy today.

LITHO CHEMICAL & SUPPLY CO., Inc.
46 HARRIET PLACE
LYNBROOK, L.I. NEW YORK

LITH KEM KO — PRECISION — USED AROUND THE WORLD — UNIFORMITY



Yours if you promise to prize it!

There's never been a letterhead book like this—one that combines the talents of eight of America's top designers.* Here you'll find eight of the freshest, most provocative letterhead ideas you've ever seen, *plus* each artist's own worksheets and comments on how and why he created his unique design. We know of no other such "over-the-shoulder" look into what contemporary designers are thinking and doing.

We believe you will prize this book, and will want to save it for future reference. We think, further, that you will notice how Howard Bond contributes to its interest and elegance. But Howard Bond users have come first, and the number of additional copies is limited. Therefore, *please request it on your letterhead!* Your interest will be honored at once.

the nation's business paper

Howard Bond

Companion Lines: Howard Ledger • Howard Mimeograph
Howard Writing • Howard Posting Ledger

* **DESIGNERS' INDEX:** SAUL BASS • BRUCE BECK
WILL BURTIN • FREEMAN CRAW • LOUIS DORFSMAN
MORTON GOLDSHOLL • JEROME GOULD • DAN E. SMITH

THIS IS NO TIME TO GUESS

In the period that lies just ahead, it will be important that you know your costs. If you are to make a profit on your operation, you must know your costs. YOU CAN'T AFFORD TO GUESS what they will be — you'll have to KNOW. With the advent of the 35 hour week, in some areas, longer vacations, higher wages, rising costs of paper and other materials you use — your costs are bound to change and these changes will have a definite bearing on your profit. NAP-L will figure the hourly rates for your plant in the light of these changes and other operating costs as reflected in your specific plant — that's part of the service you get when you join NAP-L.

NATIONAL ASSOCIATION OF PHOTO-LITHOGRAPHERS ★

Don't strangle your profit with a lot of question marks — don't guess — write TODAY for information on how to become a member of NAPL.

WHY NOT MAIL THIS COUPON to:

NATIONAL ASSOCIATION OF PHOTO-LITHOGRAPHERS
317 West 45th St., New York 36, New York

Gentlemen:

Please send me complete information about membership in the association.

NAME .....

COMPANY .....

ADDRESS .....

CITY ..... **ZONE** ..... **STATE** .....

No. of Presses .....

Shoot to Stop

high production costs

time consuming methods

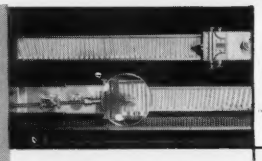
operator fatigue

with the CHEMCO MODEL F ROLL FILM CAMERA

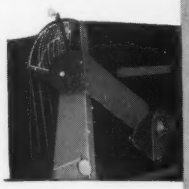
Here are some of the reasons why the Model F is used in top quality offset lithography plants.

The CHEMCO Model F Camera permits the operator to shoot an entire series of exposures without a single trip to the dark room and gives precision negatives faster and easier. It houses three rolls of any width or combination of widths of film at the same time, with each roll having its own control and length counter dial.

All controls are operated from outside the darkroom.



Scale focusing system enables operator to achieve quick and precise focusing without using ground glass.



With the Chemco Side Arm Diaphragm Control the operator simply finds the scale number on the indicator arm in his line of vision and sets it to the desired F/stop on the precisely calculated curves related to the bellows extension. The lens is ready for the exposure.

Optional sheet vacuum back provides film selectively.

Adaptable for Mercury or arc lights to meet individual requirements.

Spring loaded copyboard swings effortlessly into loading or shooting position — holds itself in place.

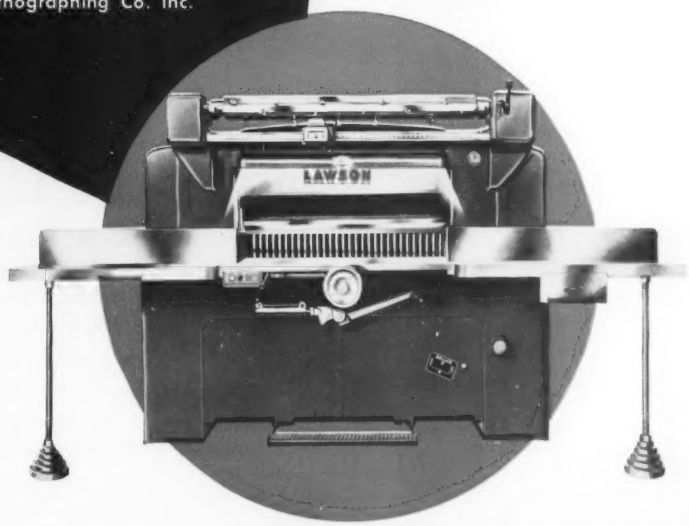
IF IT'S chemco IT'S BEST FOR PLATEMAKING

chemco PHOTOPRODUCTS COMPANY, INC. GLEN COVE, N. Y.

ATLANTA BOSTON CHICAGO DALLAS DETROIT NEW ORLEANS NEW YORK

"Our new
LAWSON
electronic
SPACER
has increased
production
and profits
tremendously . . ."

says Harry E. Brinkman,
President, Cincinnati
Lithographing Co. Inc.



We quote Mr. Harry E. Brinkman, President of Cincinnati Lithographing Company,

"We are very happy that we bought this cutter. It does everything that Charley Beachler promised it would. You should listen to what the Operator has to say . . . so much praise it would make you blush."

Write today for illustrated folder on Lawson Electronic Spacer Cutter. Also on Rapid 3-Knife Trimmer and Multiple Head Drill.

E. P. LAWSON CO. main office: 426 WEST 33rd ST., NEW YORK 1.
CHICAGO: 628 SO. DEARBORN ST. BOSTON: 176 FEDERAL ST. PHILADELPHIA: BOURSE BUILDING

. . . at the top

Coast to coast, lithographers report top performance, reduced working time, more satisfactory reproduction—with Harold M. Pitman's UNIPROCESS . . . for improved surface and deep etch plates.

If you have not yet tried UNIPROCESS in your plant, you owe it to yourself and to your customers to see what a difference in plates, reproduction — and in cost — you get with UNIPROCESS.

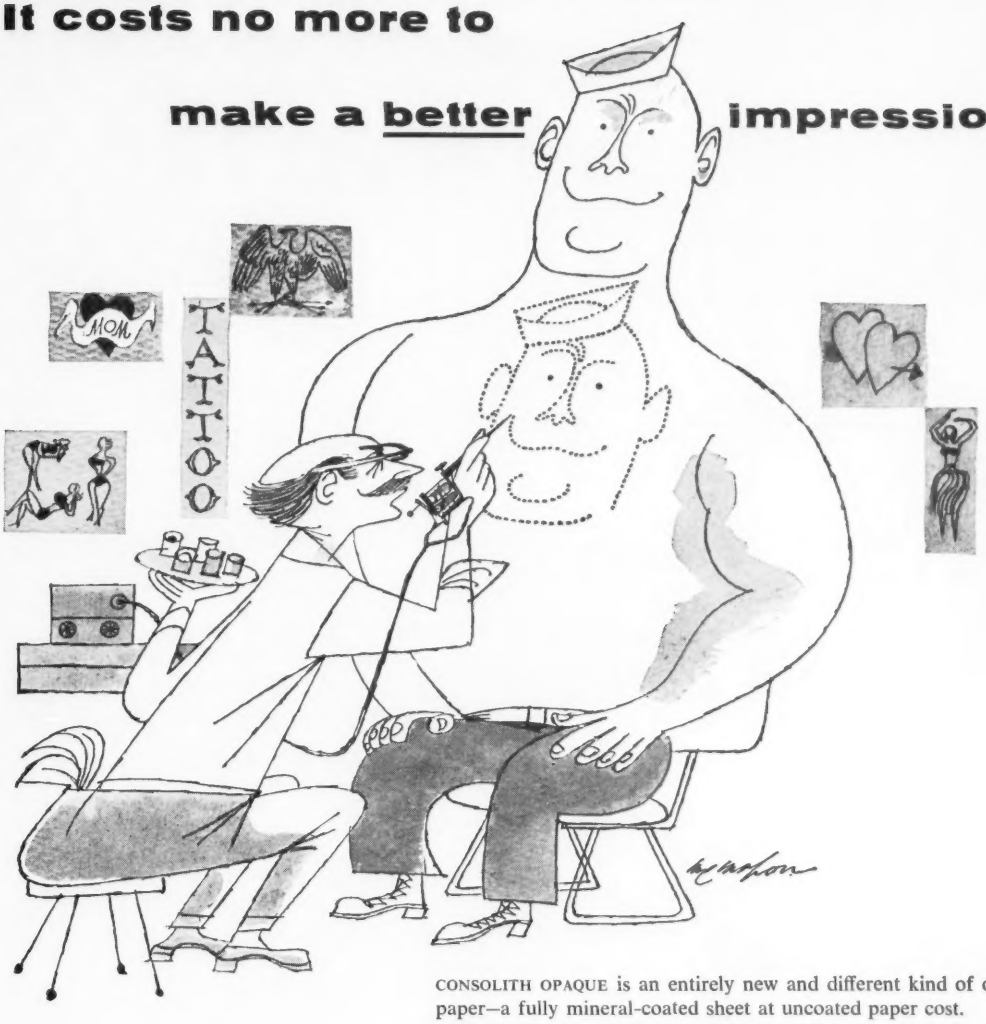
For UNIPROCESS one-time plates and specially formulated chemicals — and all lithographic supplies — call the Pitman office or distributor nearest you . . . for fast, dependable service.

UNIPROCESS

Chicago 50, Illinois — 33rd Street & 51st Avenue
North Bergen, New Jersey — 1110 13th Street
Cleveland 11, Ohio — 3501 W. 140th Street
New York 36, New York — 230 W. 41st Street
Boston 10, Massachusetts—266 Summer Street—The Pitman Sales Co.

HAROLD M. PITMAN COMPANY

It costs no more to make a better impression



...when you run

CONSOLITH OPAQUE

...the coated offset at uncoated paper prices

CONSOLITH OPAQUE is an entirely new and different kind of offset paper—a fully mineral-coated sheet at uncoated paper cost.

In all weights, CONSOLITH OPAQUE provides unusual opacity, body strength and bulk. Its unique matte finish is remarkably free from "two-sidedness" that causes annoying makeready problems. Halftones and line copy, color and black-and-white, all print with equal sharpness of detail and contrast. On the press, its outstanding dimensional stability has established an enviable record for smooth, trouble-free performance on long runs at high speed.

All this, combined with the brighter appearance and quality "feel" only a fully mineral-coated sheet can offer, explains why CONSOLITH OPAQUE is being used to competitive advantage by many leading shops throughout the country.

Ask your Consolidated merchant for free trial sheets. He's the only one who has them. Compare cost, performance and results with both coated and uncoated papers. You'll find it costs no more to make *better* impressions on Consolidated's CONSOLITH OPAQUE.

Consolidated enamel printing papers

production gloss • modern gloss • flash gloss
productolith • consolith gloss • consolith opaque

CONSOLIDATED WATER POWER & PAPER CO. Sales Offices: • 135 S. La Salle St., Chicago 3, Ill.

NOW—A WASH-UP SOLVENT THAT DOES IN ONE STEP WHAT OTHER SOLVENTS DID IN 3

Now you can have the ultimate—a newly-developed formula that cleans rollers faster, safer, better than any former solvent (or combination)

For 2½ years, our laboratories at Knox Soap Company searched for the answer. Now we have it — the ultimate in cleaning solvents that the Printing Industry has waited for — *Little Benjy 1-Step Wash-Up Solvent.*

Try *Little Benjy*. Note its safe, speedy, thorough action. See how it can save time and money for you. Once you have, we're certain you'll never want to go back to old-fashioned solvents.

LOOK AT THESE ADVANTAGES

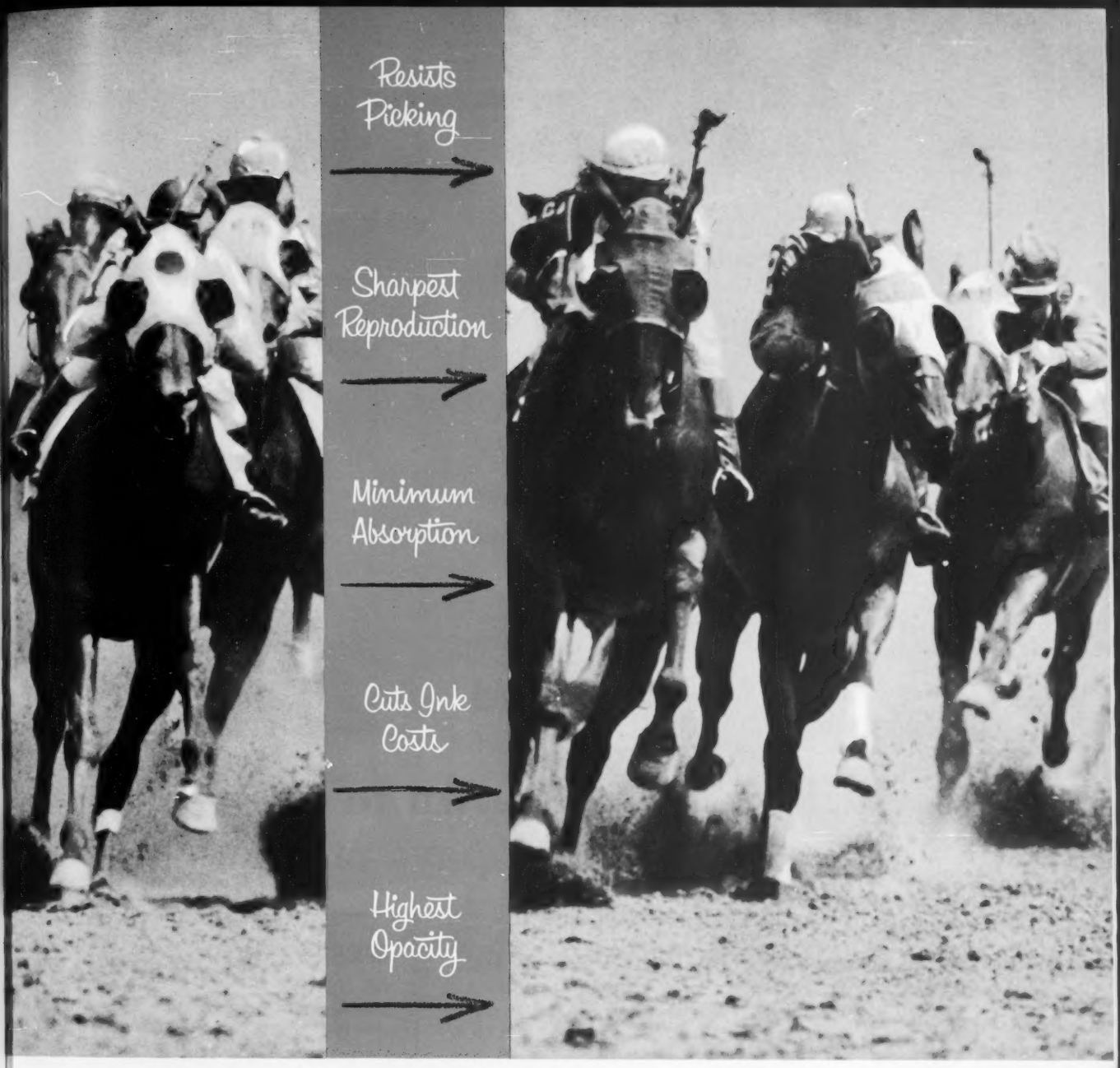
- Average wash-up time 3-10 minutes
- One solvent instead of 3 — cuts costs 75%, reduces storage space
- Cleans 70% better (based on actual laboratory tests)
- Will not damage plates
- Will not scale rollers
- Leaves no greasy residue, no unpleasant odor
- Non-toxic for all practical purposes
- High flash point meets safety requirements of every city in the U.S. (Tagliabue open cup flash point, modified to meet requirements of Central Testing Laboratory, City of New York — 152° F.)

GET YOUR FREE SAMPLE NOW

Prove to yourself that this new wash-up solvent is *the ultimate* formula you've been looking for. Write to us for generous trial sample of *Little Benjy* now.

KNOX SOAP COMPANY

3300-22 WEST CERMAK ROAD-CHICAGO 23, ILLINOIS, U.S.A.



YOUR WINNING TICKET on jobs requiring coated papers

There's a new leader in coatings for offset papers. It's Glidden Alpha Protein. This new coating material gives offset papers many superior qualities which mean extra profits to the lithographer.

It makes possible faster press runs, lower ink consumption and, at the same time, cleaner, sharper reproduction. In addition, this high solids coating material helps to give paper greater smoothness, stronger resistance to picking, higher opacity and more brilliance.

If your supplier does not stock paper processed with Glidden Alpha Protein, mail the attached coupon for complete information.

Glidden ALPHA PROTEIN PROCESSED PAPERS — Glidden QUALITY PRODUCTS

THE GLIDDEN COMPANY

Chemurgy Division

1825 N. Laramie Street
Chicago 39, Illinois

This advertisement is lithographed on paper processed with Glidden Alpha Protein. It is typical of the superior reproduction that can be obtained.

YES...

I am interested in more information about Glidden Alpha Protein; and I would like the names of suppliers in my area.

Name_____

Address_____

City_____

State_____

Title_____

When it comes down to dots... "3M" quality pays off!

The toughest test for any offset plate—a 300-line screen . . . and "3M" Brand Photo Offset Plates pass it every time!

You see, the quality of "3M" Plates is *built in*. Every plate must pass the most rigid tests before it ever leaves the factory—tests that cover the basic metal, raw materials, coatings, performance, and wear. Result: When you want superior reproduction—even up to 300-line screen—"3M" Plates deliver with perfect fidelity; hold middle-tones perfectly; print deep, smooth solids and sharp, clear highlights.

"What's more, the smooth grainless surface of a "3M" Plate not only gives perfect dot reproduction, it also requires less ink, less cylinder pressure, less water. It never scums, tones, or oxidizes on the press or in storage. You'll be proud of the reproduction you get with "3M" Plates!

Why not let us demonstrate? We'll be glad to show you how you can get better reproduction at less cost with "3M" Plates. Just drop us a card or letter.

QUICK FACTS on "3M" Brand Plates

CUT COSTS! Actual cost comparison tests prove you save time and money in your plate room and on the press with "3M" plates.

CUT WASTAGE! Scratches can be fixed—right on the press, if necessary. Accidental kinks can't harm these plates either. Just put the plate on press; pull it up snug; and kinks pull out smoothly.

GIVE MORE MILEAGE! Runs of 30M to 50M are easy to obtain with "3M" Plates. We'll be glad to show you how in your own pressroom.

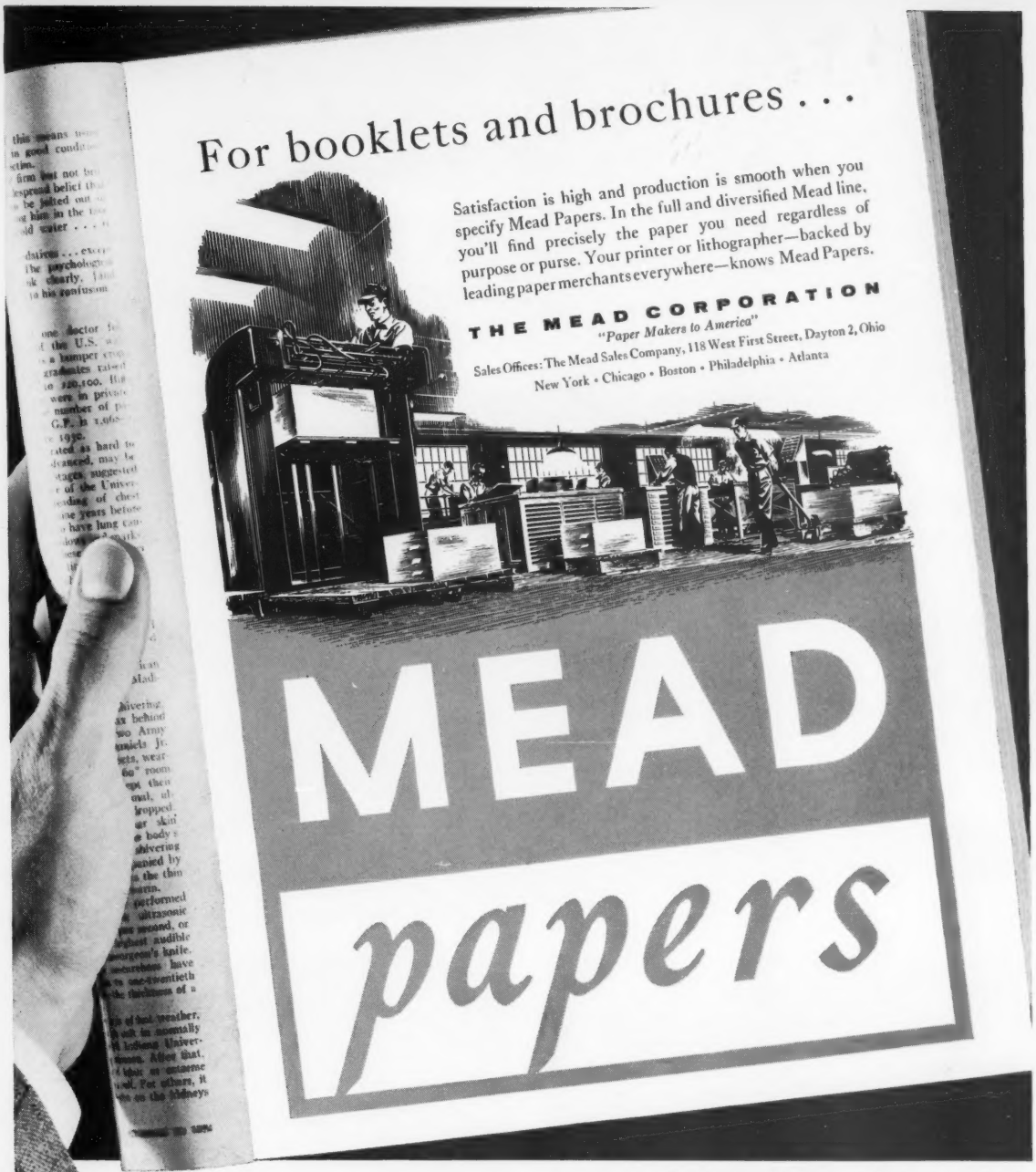
3M Photo Offset Plates

BRAND

World's largest-selling Sensitized Aluminum Photo Offset Plates

Made in U.S.A. by MINNESOTA MINING AND MFG. CO., St. Paul 6, Minn. General Export: 122 E. 42nd St., New York 17, N. Y. In Canada: London, Ontario, Canada.

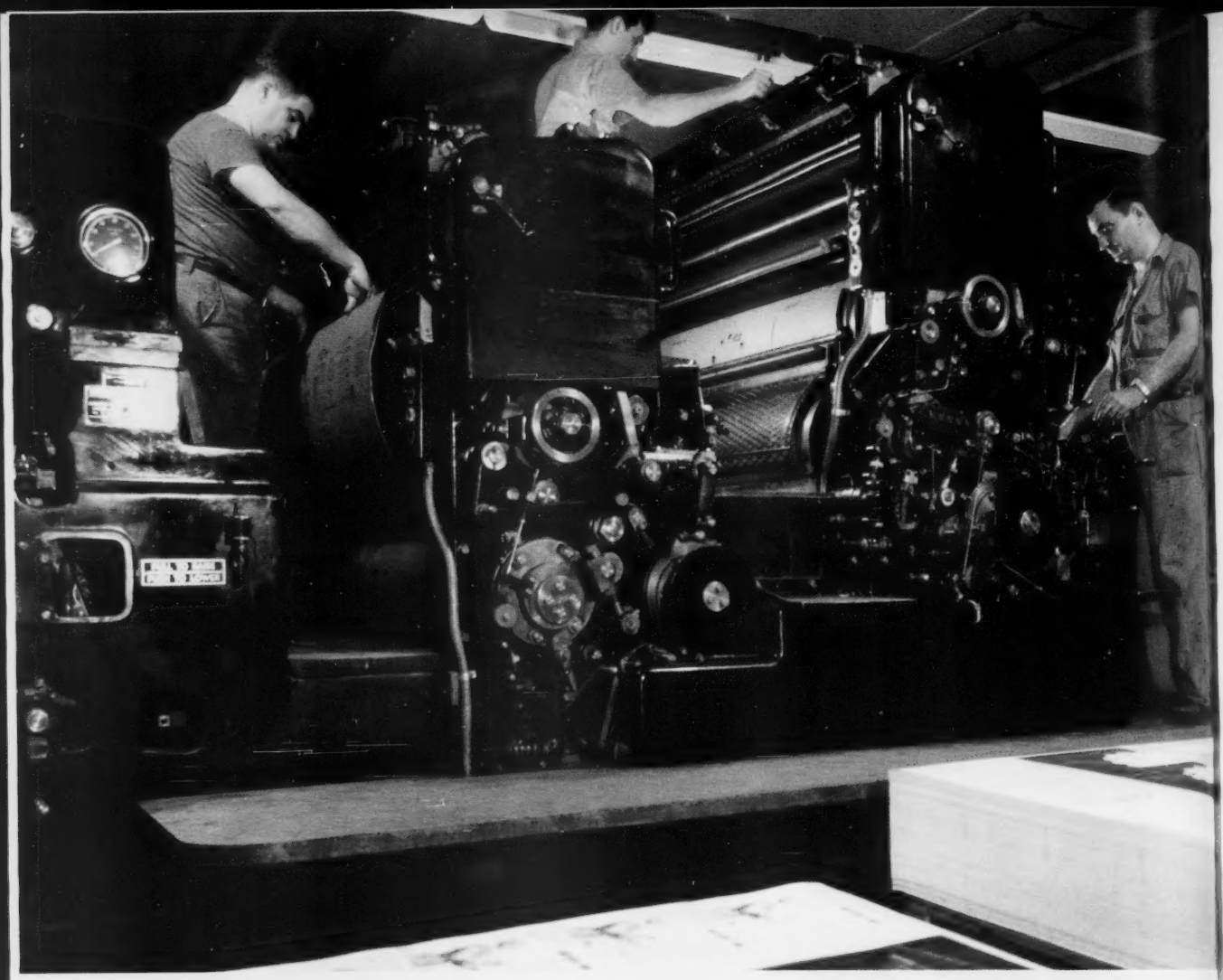
3M COMPANY


For booklets and brochures . . .
Satisfaction is high and production is smooth when you specify Mead Papers. In the full and diversified Mead line, you'll find precisely the paper you need regardless of purpose or purse. Your printer or lithographer—backed by leading paper merchants everywhere—knows Mead Papers.
THE MEAD CORPORATION
"Paper Makers to America"
Sales Offices: The Mead Sales Company, 118 West First Street, Dayton 2, Ohio
New York • Chicago • Boston • Philadelphia • Atlanta
MEAD
papers

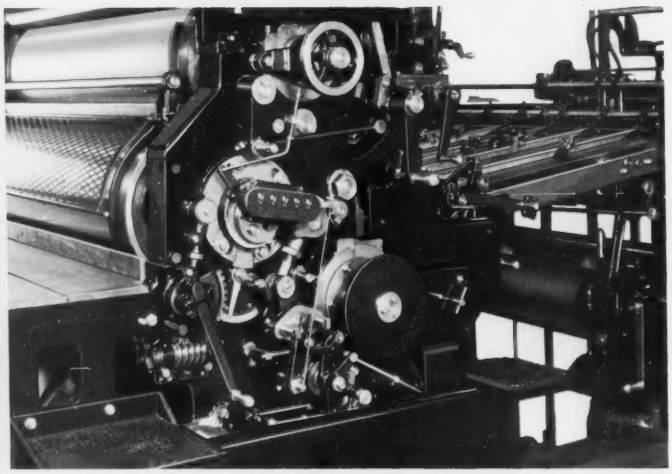
This full-page advertisement has been seen by the readers of *Time* and of *U.S. News & World Report*

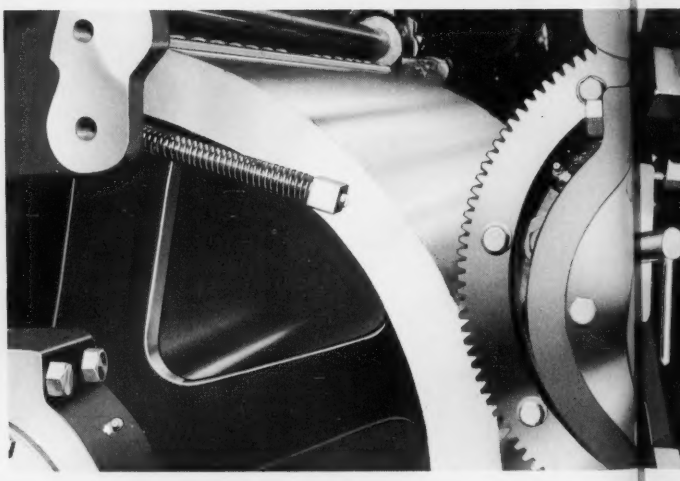
ADVERTISING THAT HELPS YOU SELL

Mead Papers mean business . . . for merchants, merchant-salesmen, printers, lithographers and advertisers. Making Mead Papers unforgettable in the minds of your customers—all who buy and specify paper products—is the job being done through our national advertising. Remember, Mead Papers mean business for you.



Harris model 245A two-color 35 x 45″ offset lithographic pr



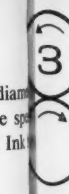


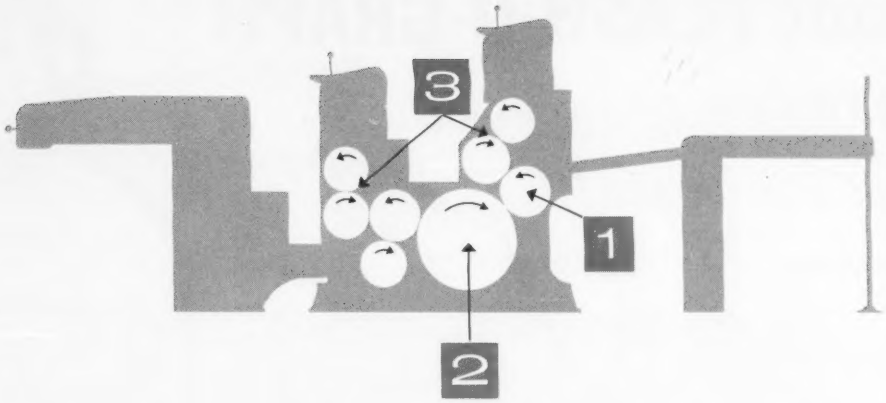
Individual Impression Cylinders

Each blanket cylinder on a Harris prints against its own individual impression cylinder. You get easy access to all cylinders in a normal working position, without moving precision-located large mechanisms.

Double-size Transfer Cylinder

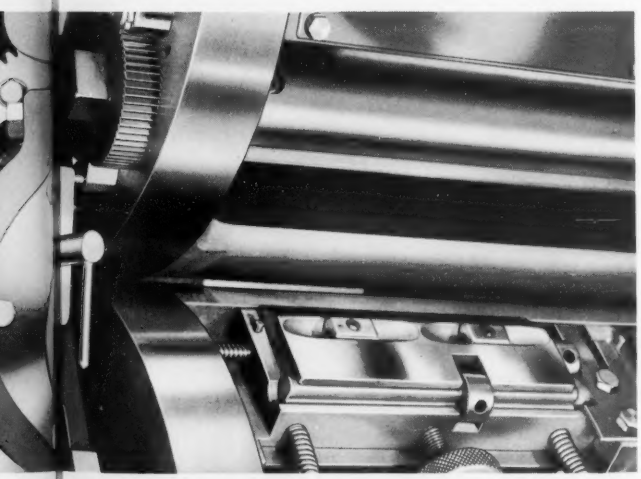
Because Harris transfer cylinders are twice the diam of impression cylinders, they rotate at half the sp Sheets are gripped firmly once, then transferred. Ink time for initial setting between colors.





Harris is the only offset press with all three of these accepted printing features

The basic design of a Harris multi-color gives you a combination of three features accepted by successful lithographers as essential to good offset printing. They are: 1. Individual impression cylinders. 2. Double-size transfer cylinder. 3. Cylinder bearers. Only a Harris has all three. They work smoothly together to give you the best multi-color printing you can get from an offset press. They help explain why three out of four multi-color presses installed by American lithographers since World War II have been Harrises.



3

Bearers for Better Print Transfer

Hardened steel bearers on plate and blanket cylinders assure you of an always-constant distance between cylinder centers. Press wear, deflection and overpacking are less critical. Send coupon for technical article.

The design and manufacture of soundly engineered graphic arts equipment is the business of Harris-Seybold. Products of its divisions and subsidiaries include the leading lines of equipment for all three major printing processes — letterpress, offset and gravure.

HARRIS-SEYBOLD COMPANY

fine graphic arts equipment . . . for everybody's profit

Harris Division • Seybold Division • Chemical Division • Special Products Division
The Cottrell Company • Macey Company • Harris-Seybold (Canada), Limited

HARRIS-SEYBOLD COMPANY
4510 East 71st Street • Cleveland 5, Ohio

Press Size	No. of Color Units 1	2	4	5
14 x 20"				
17 x 22"				
21 x 28"				
22 x 34"				
25 x 38"				
35 x 45"				
42 x 58"				
50 x 72"				
52 x 76"				

Please send me more information on the Harris offset press model (s) checked.

Mr._____

Company_____

Street_____

City_____ Zone_____

State_____

☐ Please send me your technical article on printing from bearers

"Hunt FLASH-O-GRAPH Fixer *lasts longer than any I've ever used!"*

Since we announced our new FLASH-O-GRAPH Fixer several months ago, we've had scores of photographers tell us they are fixing more — many more — square inches of film and prints with it than they've ever done with any other fixer.

We can't say we're surprised. We made it to outperform any fixer, liquid or powder, on the market. Repeated lab tests said it would. But it's actual use in the field that really tells the story.

Photographers get *high speed* too, with FLASH-O-GRAPH. Photo mechanical film clears in less than 20 seconds, commercial pan film in less than 60 seconds, photo papers in less than 45 seconds.

These important savings are ready for you, sure enough, with Hunt FLASH-O-GRAPH. But, of course, they could be ready a hundred years and never do *you* any good—until you try it in your own shop and see for yourself. Right?

So do yourself a favor. Order a carton today and check the results with care. You can order direct from any Hunt Branch, or write for Price List to Palisades Park, N. J.

P. S. You'll also get *better* results with FLASH-O-GRAPH. Because you control the hardening quality of film and prints to suit your own conditions of temperature and humidity, by adding just the right amount of hardener from the separate bottles supplied in each carton.

Each carton of Hunt FLASH-O-GRAPH Fixer contains four 1-gallon jugs of Fixer, four 1-pint bottles of FLASH-O-GRAPH Hardener, and two measuring graduates.

Manufacturing Chemists — QUALITY CONTROLLED HUNT CHEMICALS — *Established 1909*

PHILIP A. HUNT COMPANY

PALISADES PARK, N. J.

Chicago • Cleveland • Cambridge • Brooklyn • Atlanta • Dallas • Los Angeles • San Francisco

This is the Hammermill Bond advertisement in: THE SATURDAY EVENING POST, January 29—TIME, January 17—BUSINESS WEEK, January 22

Another reason why Hammermill Bond prints better, types better, looks better
Rainbow in black and white helps Hammermill match colors exactly
HAMMERMILL BOND
...yet HAMMERMILL BOND costs no more
—and actually less than many other watermarked papers

You sell more printing when you use THE FAME OF THE NAME of Hammermill papers

for example:

HAMMERMILL BOND

Forty-three years of national advertising have given Hammermill Bond the greatest acceptance, the widest use of any watermarked bond paper. This makes it easier to sell printing on *any* Hammermill paper. In the case of Hammermill Bond, for instance, the long established acceptance of the Hammermill name gives added appeal to these other qualities:

First, it *prints* better. Printers know from long experience they can rely on Hammermill Bond for uniform quality and fine pressroom performance. Now, they say it prints better than ever before.

Second, it *types* better. That pleases your customers because its smooth typing and writing surface makes it easier to turn out neater, more readable letters. And corrections are practically invisible on Hammermill Bond's easy-to-read surface.

Third, it *looks* better. Easy to see for yourself why so many business executives say so. That's because Hammermill Bond's brilliant blue-white gives even routine correspondence added prestige and readability.

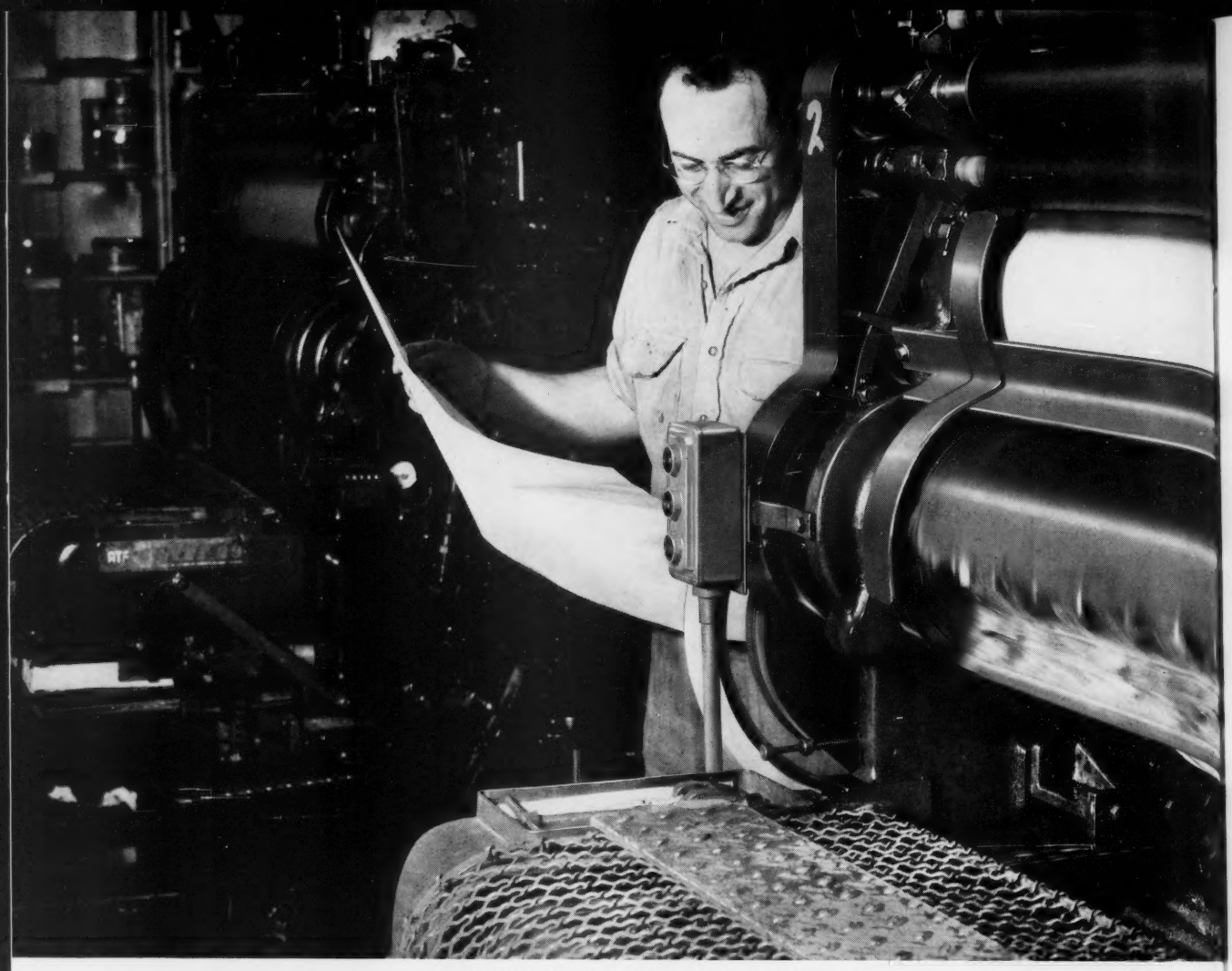
Recommend Hammermill Bond for letterheads and office forms. Your customers will like the results!

Are you letting this shield help you? *Hammermill consumer advertising tells businessmen they can obtain printing on Hammermill papers wherever they see the shield of the Hammermill Guild of Printers. Why not let this advertising work harder for you by displaying the Hammermill Guild shield.*

HAMMERMILL GUILD OF PRINTERS

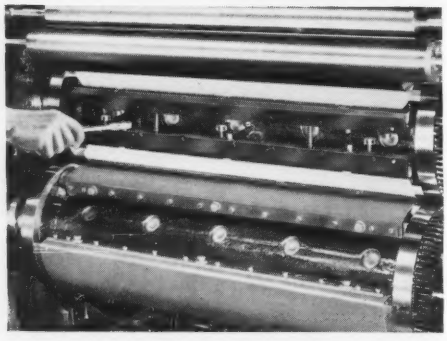
...yet HAMMERMILL BOND costs no more

HAMMERMILL PAPER COMPANY, EAST LAKE RD., ERIE 6, PA.



"CUT CHANGE-OVER TIME IN HALF"—that's what Hodes-Daniel pressmen say about these two ATF Chief 29's.

How ATF Chief 29 saves money on runs under 50M



MORE GET-UP-AND-GO of ATF Chiefs is the result of several key features. For example, accessibility of plate and use of bar clamps make plate changes swift and simple.

Take New York's Hodes-Daniel Co., Inc., for instance.

Specializing in syndicated direct-mail pieces, they've got to turn out top-grade color work and keep a tight rein on production costs at the same time. They do it with two ATF Chief 29's.

Here's how they figured: their choice narrowed down to two presses—an ATF Chief 29 and one more expensive and roughly 500 impressions an hour faster. But the time required to change over from one job to another on the second press was about twice that required on the Chief!

That meant the Chief could be set up and run 5M impressions before the other press even got started. And it would still be ahead of the other press after 10 hours or a run of 50M impressions.

It wasn't a hard choice. Hodes-Daniel installed an ATF Chief and followed up a year later with another.

If production costs are keeping you up nights, check the complete line of ATF Chiefs, including 14 x 20, 17 x 22, 17 x 24 and 22 x 29 precision-built presses. They're setting a new standard for the industry in efficiency.

American Type Founders, *a subsidiary of Daystrom, Inc.*, 200 Elmora Avenue, Elizabeth, New Jersey.

C.4.1

Better, More Profitable Printing from the Widest Line of Processes

GRAVURE . . . LETTERPRESS . . . OFFSET

ATF

Banks have news for you

More people are learning every day about the dozens of ways their bank can help them—through skillfully prepared printed promotion. Much of this business-building information appears on Oxford Papers because these quality papers provide *extra* printing accuracy and fidelity of tone, line and screen. Let your Oxford Merchant show you successful examples.

TWO VALUABLE AIDS. (*1*) *The new* **OXFORD SELECTOR CHART**, *a time-saving master guide to the right grade for each purpose.* (*2*) *The new* **OXFORD PAPER COST CALCULATOR** *for finding the exact cost per 1000 sheets. Ask your nearby Oxford Merchant or write us direct.*

Oxford Papers

Help Build Sales

OXFORD PAPERS

OXFORD PAPER COMPANY, *230 Park Avenue, New York 17, N. Y.*
OXFORD MIAMI PAPER COMPANY, *35 East Wacker Drive, Chicago 1, Ill.*
MILLS AT RUMFORD, MAINE AND WEST CARROLLTON, OHIO

Investigate before you invest!

Investigate Miehle's Complete Line of Offset Presses . . .

Before you Invest
Investigate Miehle

- Improved Stream Feeding
- Swing Gripper Transfer
- True Rolling
- Superior Inking and Dampening
- Automatic Lubrication
- Positive Sheet Control from Feeder through Delivery

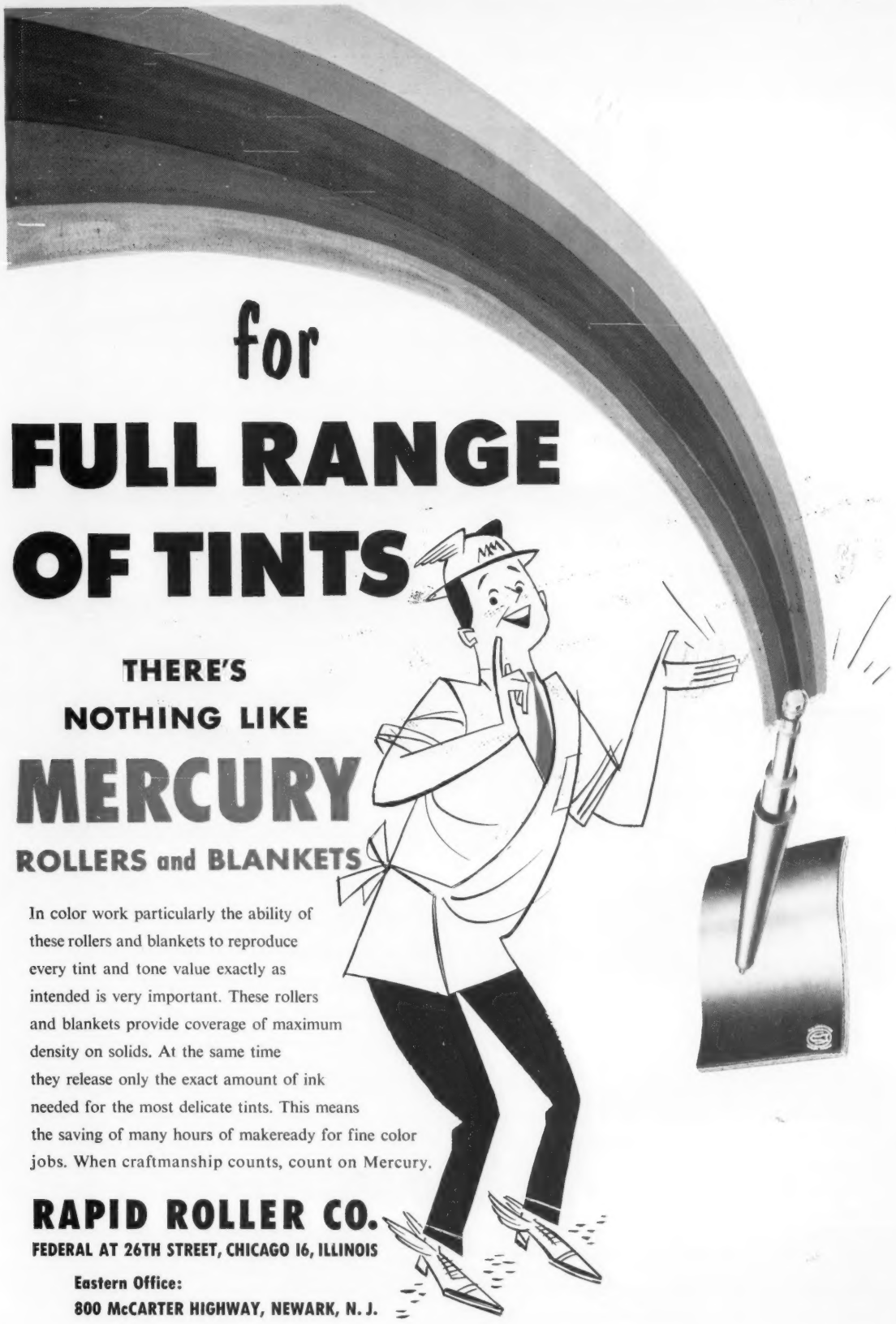
On any basis of comparison Miehle Offsets are the soundest investment you can make—an investment that will pay dividends year after year after year. For full information on Miehle Offsets write The Miehle Printing Press & Manufacturing Company, Chicago 8, Illinois

PRESS	SHEET SIZE	SPEEDS UP TO
29 Single Color	23 x 29	7000
36 Single Color	23 x 36	6500
41 Single Color	30 x 42	6800
41 Two Color	30 x 39	6800
49 Single Color	36 x 49⅝	6500
49 Two Color	36 x 49⅝	6500
61 One to Five Color*	42 x 58	6500
76 One to Five Color*	52 x 76	6000

* *The Miehle 61 and 76 Offsets are built on the Unit Construction principle and are available as one, two, three, four, and five color presses.*

The Miehle

Leader among the world's manufacturers of fine printing equipment.



for FULL RANGE OF TINTS

THERE'S NOTHING LIKE MERCURY ROLLERS and BLANKETS

In color work particularly the ability of these rollers and blankets to reproduce every tint and tone value exactly as intended is very important. These rollers and blankets provide coverage of maximum density on solids. At the same time they release only the exact amount of ink needed for the most delicate tints. This means the saving of many hours of makeready for fine color jobs. When craftmanship counts, count on Mercury.

RAPID ROLLER CO.
FEDERAL AT 26TH STREET, CHICAGO 16, ILLINOIS

Eastern Office:
800 McCARTER HIGHWAY, NEWARK, N. J.

ECONOMICAL...DEPENDABLE...LETTERPRESS OR OFFSET

ARDOR
BOND

in the *NEW* stronger protective wrapper!

Ardor Bond, in cut-size packages, now comes in a new, easy-to-open carton! Just pull the convenient tear-strip and the carton top comes off in a jiffy!

With its fine quality, surface-sized finish, Ardor Bond always can be depended on to do an outstanding job...letterpress or offset. When you have a call for an economical, unwatermarked paper, call for Ardor! Your Nekoosa paper merchant has it in white and six colors.

ANOTHER *Nekoosa* PAPER

by the makers of Nekoosa Bond • Nekoosa Ledger • Nekoosa Mimeo • Nekoosa Duplicator • Nekoosa Manifold

NEKOOSA-EDWARDS PAPER COMPANY • PORT EDWARDS, WISCONSIN

Editorials

IT is naive—nay almost un-American—to expect that the cost of government could be reduced in this day and age. The public has come to believe that government is something that automatically increases in cost, try as our economists may to reduce it.

That's why it was a pleasant shock to learn that the government, and hence the taxpayer, had been saved $3 million in the operation of one federal department. The department is the Government Printing Office and the man who must be credited for that saving is Raymond Blattenberger, Public Printer of the United States. (See news item in this issue).

In a way, though, this action should come as no real surprise, particularly to Mr. Blattenberger's many friends in the graphic arts industry. For it was just a year ago that he made a similar voluntary reduction in capitalization, returning $5 million to the treasury till.

At that time Mr. Blattenberger explained that the windfall had been deposited in the treasury's general funds because he considered it to be in excess of his operating requirements. He credited improved procedures and better fiscal policies in GPO for the reduction. And he added "I hope that this is not the end, but only the beginning. I am looking forward to the day when every government agency will have its printing done at the Government Printing Office, not because it is required by law, but because GPO renders the type of service the agency wants when the agency wants it."

Mr. Blattenberger's fine performance in this tough role is a nice reflection on the graphic arts industry, from whose ranks he was chosen for the job. And, besides being heartening news to lithographers as taxpayers, it should serve as an incentive to them, in large shops and small, to attempt the same sort of savings in their plants that the Public Printer has found it possible to do on a grander scale.

Cost panels are standbys of trade association meetings, but it is feared that many lithographers don't take the advice given at these meetings very seriously. How about a placard at the next such panel reading something like this: "The Public Printer saved $3 million this year in his plant, how much did you save in yours?"

INTRODUCTION to lithography of a whole series of photo-composing machines during the last few years had made many industry leaders wonder just how soon labor difficulties could be expected in regard to union jurisdiction over these novel machines.

An agreement was reached last month in a letterpress shop that is important because it will be cited as a precedent in future negotiations and because it was the climax of remarkably smooth industry-union teamwork. (It is described in detail in this issue.)

The agreement was reached at the plant of the Milwaukee *Journal*, after conferences and study sessions with the executive councils of the AFL International Photo-Engravers Union and the AFL International Typographical Union. It applies at this time only to the operation of one Intertype Corp. Fotosetter at the *Journal's* plant, but it has set an example of industry-labor cooperation that should go a long way toward making future negotiations amicable.

Dozens of colors available to lithographers, by using

Color By Overprinting

MORE than 20 years ago a firm operating under the name of Jean Berté Inc. startled the world of printing by issuing pamphlets demonstrating water-base inks for the overprinting of solid transparent color. The process involved the use of rubber plates. Some of the effects achieved by Berté were amazing for their brilliance and range of color.

Even today, people in graphic arts still talk about the Berté process. Although it was never widely used, it made a profound impression. Despite its limitations, artists, printers and designers were fascinated by its results.

Initial Excitement

It is interesting to speculate upon what might have happened had overprinting been introduced at that time as a method applicable to all types of printing processes, using the standard inks and plates of each process. The initial excitement over the Berté method might have grown and spread until it became a universal printing and art form. Unfortunately, too many factors were missing.

Today, color by overprinting is a practical reality for any process and is particularly well suited to offset lithography for reasons which I shall presently set forth.

First, let me review briefly what color by overprinting is, as well as what it is not. It is the well-known principle of superimposing solid areas of transparent color to achieve subsidiary colors as: blue over yellow to produce green, red over yellow to produce orange, etc. The object, of course, is not to arrive at a single color with two impressions, but to get three colors with those same impressions — two inks plus their overprint. Carried further we find that three transparent inks will give us seven colors, four inks 15 colors, and five inks 31! This is simple arithmetic. While it is interesting, many printers and lithographers still seem to wonder what may be done with this knowledge once we have acquired it. I have found so many answers to this question that I find it difficult to crowd them into one brief article on the subject. Indeed, an article such as this can do no more than whet the appetite, and it is for that reason I have compiled a 256-page volume entitled *Color by Overprinting* to demonstrate some of the innumerable uses of the technique.

Printed By Offset

Of especial interest to lithographers everywhere is the fact that most of this unique book is being printed by offset. We are working in this instance on a two-color Harris-Seybold press, running the sheets through six times for a total of 12 impressions — eleven colors plus black.

Why so many colors? For the reason that *Color by Overprinting* is

planned primarily to show a complete range of overprint combinations in a series of color charts. Using 11 carefully selected colors as a basic list, the 165 color-chart pages show every possible grouping of three and four of the inks. Through a specially-designed index system any specific group — such as green, brown and purple — can be located quickly.

The group appears in an overprinted arrangement showing the colors achieved by (for example) green over brown, purple over brown, purple over green and all three inks superimposed. Below each tricolor group are eight four-color groups, showing the 15 colors which can be achieved by adding a fourth ink to that particular tricolor combination.

Color Charts

Thus, for the first time in the history of printing, a comprehensive system of overprinting color charts will be available to everyone in the graphic arts industry. These charts represent the foundation of a new art directly related to printing.

Color by Overprinting is, then, both a book and a principle. The book will contain over 40 illustrations by the foremost illustrators and designers of our time, from the fields of advertising, magazine illustration, book illustration, packaging, greeting card design, abstract art, landscape painting, portraiture and direct mail. Yet every example shown in the book is a solid-color overprint from line plates. Only in one or two instances has any halftone treatment been employed, yet the multiplicity of effect, color, style and subject matter is far beyond anything previously accomplished with line reproduction and in some instances is comparable to halftone color reproduction.

At the same time I would like to make it very clear that solid color overprinting is not and never can be a substitute for full color process reproduction. Rather it is a distinct method in its own right — a method which greatly enlarges and extends the potentialities of line plates for multicolor work. As such it is economical as well as artistically effective.

Litho Well Suited

Offset lithography is, as I have stated earlier, particularly well suited to solid-color overprinting. Because it is possible to maintain solid coverage over a wide area and still apply a thin film of ink, there is less tendency in offset for overprints to pile up heavy layers of ink than there is in other processes. Furthermore, as overprinting art techniques develop, more and more transparent overlays will be used. Along with the improvement of various photo-setting machines for offset typography, the new art techniques can provide copy for direct

By Donald E. Cooke

The John C. Winston Co.
Philadelphia

contact plate-making. Already we have done some successful experiments along these lines using Bourges sheets. And a number of other, greatly improved overlay techniques are being perfected specifically for color overprinting.

Some years ago a great many children's books were printed by the "Glaser Process." Although this process was not exclusive with William C. D. Glaser, it was largely developed by him for the production of colorful juvenile books by offset. Actually these illustrations were line overprints, and some were extremely well-executed. Unfortunately, the process required that artists work on glass — usually in the Glaser shop — a cumbersome method which had obvious shortcomings. Not only was the glass itself difficult to handle, but the artists worked each color in black. Like most other pre-separated art techniques prior to the introduction of Bourges sheets, artists had to guess at the color effects and hope that they were giving the required strength to the yellow and blue separations to produce a satisfactory green, and so forth.

Glaser Process

Nevertheless, the Glaser process was so successful, both economically and artistically, that some of the finest children's books of the '30's were reproduced by this method. There can be no doubt that Mr. and Mrs. Glaser, working closely with artists and publishers on their process, contributed tremendously to the rapid growth of the offset industry in book production. What few people realize is that, like the Berté process, the Glasers had also contributed to the long range development of color by overprinting.

Today, the overprinting principle is finally ready to come into its own as a full-fledged, permanent member of the color reproduction family. It is no longer a highly specialized process, but thanks to Berté, Glaser, Bourges, and finally the book—*Color by Overprinting*—we have a universal art and printing technique whose application is spreading through the entire graphic arts industry.

Even so, there are technicians in all branches of the industry who, though they may recognize the potentialities of solid color overprinting, still are unfamiliar with its techniques. Certain facts are not generally recognized.

For example: any solid color can be photographed in line by using the proper filter. However the color should be at least a 50 percent value, or strength, to avoid the necessity of recontacting for sufficient density in the negative. This is particularly true with shades of blue or gray. Even a 50 percent blue must be recontacted to produce sharp line negatives.

Four Overprints

Another fact frequently questioned is the degree to which solids can be overprinted successfully. Heavy solid overprinting up to four impressions, or 400 percent build-up of inks, can be run succesfully by offset if the paper and inks are right. This statement is based on actual experience with a two-color press. Although we have not attempted such a heavy overprint on a four-color press, I believe it to be possible.

Finally, transparent offset inks can be formulated to match Bourges colors so exactly that when they are

(*Continued on Page* 119)

LTF Reports:

Short Cuts In Platemaking

IN RECENT years, the technical advancements in lithographic printing have been almost revolutionary. With LTF's platemaking developments—surface treatments cellulose gum etch, the sensitivity guide, non-binding lacquer, and improved application techniques—you can now make and use surface plates for the finest quality printing. Modern surface plates, with their consistent, dependable performance and ease of handling on the press, would astonish an old timer.

Along with these technical advancements, the amount of printing done by lithography has increased tremendously. The number of suppliers also has increased. Each offers old products, improved new products, and alternate material and methods.

Now, in some plants, the runs are not very long and a lot of plates have to be made. The platemaker is asked to take short cuts—to reduce his plate-making time. In the tangle of the new and the old methods and materials — the claims and counter-claims that often conflict—the platemaker has a tough job when he tries to short cut. When he does it, he frequently carries out an operation that is not particularly important, and omits a step that is vital. The discussion in this article is an attempt to help him . . . to keep him from short cutting the wrong step.

These articles, on platemaking shortcuts and halftone vignettes will appear in the Lithographic Technical Foundation's Research Progress, No. 33.

LTF Recommendations

The Lithographic Technical Foundation always has confined its platemaking recommendations to ways of making the best possible plate. There are three main reasons for this. The first is that nobody can guarantee that a plate made one way will run for 5,000 impressions and that if you do something else to it, it will run 50,000. The life of a plate depends too much on how it is handled on the press, the skill and knowledge of the pressman, and the condition of the press itself.

Secondly, it's very difficult for anyone to rate the importance of the different steps in platemaking. It's hard because they all tie in together and affect each other. For instance, you'll find a platemaker who swears by pre-etching—says he can't make a decent albumin plate without pre-etching. Now, this *could* be true. But, if you question him further, you'll probably find that he also does things that make his plates hard to develop like using a coating thickness that is always a little too thin. Even though pre-etching usually doesn't offer much if the plate is made incorrectly, it compensates for the platemaker's other errors in this case. So, in any evaluation of platemaking steps, we have to assume that each step is done correctly.

The last reason is the most important. Briefly, it is simply that the

Evaluation of Steps: Surface Plates on Zinc

Complete Procedure

Steps Listed in Order of Making the Plate	
	Develop
	Ammonia Rinse
	Post-Treatment
	Powder
Counter-etch	Etch
Pre-Treatment	Apply second etch
Coat and expose	Gum
Apply non-blinding lacquer	Asphaltum
Apply developing ink	

Platemaking Steps

Short Cutters—Omit Numbered Steps Only—Highest Numbers First

Counter-etch	BASIC	Post Treatment	PLATE
Coat and expose		Etch [1]	
Developing ink		Gum	
Develop			

1. Apply non-binding lacquer
2. Second etch [2]
3. Asphaltum
4. Ammonia rinse [4]
5. Powder
6. Pre-Treatment [3]

[1] In all cases, and with all gum etches, the etch must be dried down.
[2] Second etch is usually not necessary on plates smaller than 35 x 45 inches.
[3] Pre-Treatments like pre-etch or pre-Cronak are usually done to make it easier to develop the plate. Ordinarily, they are needed only under extremely bad conditions of high humidity and high temperature or with certain brands of casein coatings. In practically all cases, you can avoid difficult development by using a little thicker coating on the plate.
[4] The ammonia rinse is an essential step in making the basic plate with soybean casein, and certain modified casein coatings.

platemaker's job is to make plates that print with the least trouble. Whenever he short-cuts, he gambl on how well the plate will print.

The gamble may look attractive because of the number of times that he can get away with it. Over a period of time, however, short-cuts in platemaking usually cost a lot more than they save. It takes only a couple of makeovers or a few hours of slow running trying to coax a touchy plate to lose all the "savings" from many, many other short-cut plates.

LTF's work has shown that with a few more minutes in platemaking, you can always make plates that are consistently good. And, since these few extra minutes can save expensive hours in the pressroom, we believe that short cutting in platemaking is a false economy. We urge you to avoid it whenever you can.

With these facts in mind then, LTF offers the following information only as a guide when it is absolutely essential that you cut your time on a particular job.

Evaluation of Platemaking Steps

All the steps required to produce the best possible surface plates are listed on the opposite page. The column at the top shows them in the order that you would follow in making the plate. The column on the bottom lists these same steps in the order of their importance.

If it is *essential* that you skip any steps, omit them starting from the bottom line of the lower column. Only under very rare conditions is it ever O.K. to omit any step that is part of the basic plate. *Under NO condition should you ever omit the post-treatment!* It takes only two minutes, yet it corrects for residual coating—the basic fault that has given surface plates a black eye for many years.

Sometimes, if the run is very short (three or four hundred sheets, for example), you can gum the plates after the post-treatment and omit the etch. If the plate is to go to press immediately, warm it in the whirler, under a heat lamp, or before an arc lamp for a few minutes first.

If you are testing new procedures

(*Continued on Page* 115)

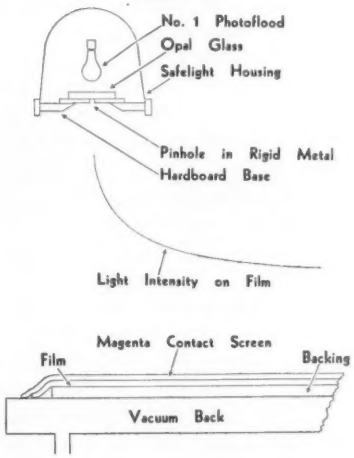
How To Make Halftone Vignettes

HALFTONE vignettes for labels, letterheads and novelty effects are difficult to produce. It is hard to make good ones that have an even fall-off in tone values. Most vignettes are made from artist's copy. The quality of the final halftone depends on the quality of the art work. And, it is tough to paint or air brush a tone that has a completely uniform fall-off.

Sometime back, the Lithographic Technical Foundation developed a continuous (step-less) halftone gray scale that is very useful in tone reproduction studies. A number of lithographers became interested in the technique of producing them with the idea of adapting the method to make vignettes.

This article will cover two methods of producing continuous halftone gray scales or vignetted tink blocks that were developed at the LTF laboratory.

Figure 1



Gray Scales

The set-up to make gray scales or continuous vignetted tint blocks is quite simple. The main components are a pin-hole light source, a contact screen, some method of holding the screen and film in intimate contact during the exposure and some device to support the light source.

For the light source, LTF modified a common darkroom safelight housing. As shown in *Figure* 1, the filter was removed and was replaced with a pin-hole lens device. The lens mount is a piece of ⅛" thick hardboard like Masonite. A circle of this material is cut to fit the housing and a three-inch diameter hole is cut in its center.

The pin-hole lens was made in thin metal. LTF used a piece of an old presensitized aluminum plate that was .005 inch thick. Any thin, rigid metal or even stiff hard paper will work.

Size Important

The pin-hole that you make in the metal can't be too small and can't be too big. If it is too large, the image it forms will be blurred. If it is too small, undesirable diffraction patterns will result. The size of the hole should be between .02 and .04 inch in diameter. (A number 60 drill will make a .04 hole and a number 76 jewelers drill will make a .02 inch hole.) Remove any burrs with fine emery paper

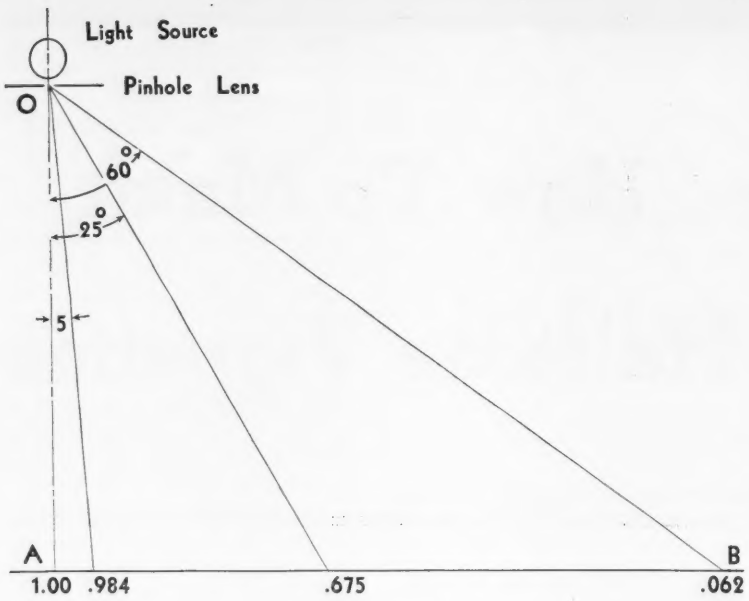


Figure 2

and paint the metal on both sides with dull black paint.

A pin-hole lens in this size range will not distort the light rays. Also, it will cover a very wide field of about 125°. (A good wide angle lens will cover a field of only 75° to 90°).

The next step is to cement or fasten the metal over the hole cut in the cardboard. Then place a small piece of opal glass over the hole to even out the light field. When you put a #1 photoflood bulb in the light socket and install the pin-hole assembly, your light source is complete.

The next requirement is some way to hold the film and the contact screen. LTF used the vacuum back on their camera which swings down parallel with the floor. To keep the vacuum lines from showing through the film, a piece of thin metal (old presensitized plate) was used as a backing sheet. The size of the backing plate depends on the size of the film you will be using. The plate should be about ½ inch smaller than the film in each dimension. A single vacuum slot on each side of the film not covered by the backing plate will provide plenty of vacuum to hold the contact screen, the film and the plate in position.

The final requirement is some sort of support for the light. At LTF, an ordinary laboratory stand and a couple of clamps were used. Anything will work so long as it will hold the light at a right angle to the film and permit the lamp to be adjusted to different heights above the film (from ½ to 12 inches).

With this equipment, you're ready to make vignettes.

Making Gray Scales and Circular Vignettes

The vignettes produced with this equipment will have the form of circles. To get a gray scale, you merely cut a strip out of the circle from the outside edge to the center.

The size of the circle or the length of the scale will depend, of course, on the distance of the light source from the film. Exposure times also vary with this distance.

For example, using process ortho film and with the light ½ inch above it, LTF found that the exposure will be about three seconds. This will produce a halftoned vignette that goes from a 95 per cent dot to a 5 per cent dot in about 1½ inches. If you raise the light 7½ inches above the film, the required exposure will increase to about 6½ minutes and the length of the vignette will be close to 13 inches.

The best way to figure the exposure time for a particular job is to make a test and then compute exposures for different light-to-film distances using the inverse square law. For example, if the correct exposure for a 2″ distance is 15 seconds, the exposure for a 4″ distance will be one minute (2 squared or 4 x 15 seconds). For a 6″ distance, (three times the original 2″ distance) the exposure will be 2 minutes 15 seconds (3 squared or 9 x 15 seconds).

The chart below will give an approximation of the length of vignettes produced by different light-to-film distances and the exposure required.

Lamp-Film Distance In Inches	Exposure Sec. #1 Photoflood	Vignette Length in Inches
½	3	1½
1½	18	3
2½	45	4½
3½	85	6
4½	141	8
5½	210	10
6½	294	12
7½	391	13

All of the vignettes made at LTF were developed for two minutes and 45 seconds at 68° F. in process film developer.

Rectangular Vignettes

You can make rectangular vignettes by using a different light source. What you want is a fine slit-type aperture instead of a pin-hole. LTF made a satisfactory light source from a 15 watt fluorescent desk lamp. The slit-type "lens" that was used was made from a piece of exposed and developed process film. This piece of opaque film should be about two inches larger in each dimension than the size of the reflector of the fluorescent lamp. The slit or aperture was made with a very fine etching needle. All you do is scribe a fine clear line in the emulsion the length of the fluorescent tube.

The film is then fastened to the lamp reflector with tape. Position the slit over the center of the tube. Make sure that you exclude all stray light from the lamp. All of the light leaving the lamp must come through the slit.

The procedure of making the vignettes is the same as previously described. Exposure times, however, are different. LTF found that you get a vignette about 1 inch wide with a light-to-film distance of 1½ inches and a 30 second exposure. The vig-

(*Continued on Page* 113)

Calendar Art then and now is shown by a couple of Brown & Bigelow models. At left, Janna Alto is holding a 1955 calendar girl by Zoe Mozert entitled "A Good Deal." Ann Anderson shows what the calendar, circa 1907, looked like.

haps attracted most comment and attention, but landscapes, human interest subjects, sports and outdoor life have fared just as well, B & B reports. Leading the 1955 group, for instance, is the official Boy Scout calendar, painted by Norman Rockwell.

Taste Differs

"Taste differs in localities, among groups and in different periods," according to Joseph H. Summers, of the calendar company. "We try to present themes to please varying tastes in every part of the country. Occasionally our selection may be wrong and again we may come up with a new calendar which proves exceptionally popular."

Mr. Summers went on to cite the creations of artist Paul Detlefsen,

Offset helps put girls, landscapes, sports on

60 Million Calendars a Year

THERE'S about a fifty-fifty chance that every business office or home in the United States is displaying a product of Brown & Bigelow, St. Paul, Minn. Chances are better than even that the product, one of a myriad variety of calendars, was printed by offset lithography in the company's huge plant.

Lots of other printers and lithographers share in this big market each year in all parts of the country, but Brown & Bigelow has a big lead, producing 60 million of the total calendar output in the United States of 125 million a year.

Calendars, of course, always have been a necessity and lithographers have recognized this fact, earning a large portion of the calendar production business. B & B, for instance, has been making calendars for 58 years, and business gets better all the time.

Offset Leads

Although the company uses letterpress and gravure as well as offset for calendars, the latter gets the nod in a high percentage of jobs, according to the company. Type and economy of operation, size of run, number of sheets to be fed and other production details are the determining factors for calendar jobs, which have run to more than two million for some very popular types.

There are scores of calendar types, many of them lending themselves to lithography because of the paper or colors used, or length of run. Through the years the girly calendar has perhow to do it calendars, the Officer Kelly safety calendar, Baseball Hall of Fame series and others as having been highly successful.

To lithograph its calendars better, the research department of the company has adopted a tri-metallic plate of zinc coated with copper and chromium. Under controlled conditions, the image is etched through the chromium into the copper. Plates prepared in this way reproduce the most delicate color tones perfectly and the plates are far more durable than regular zinc.

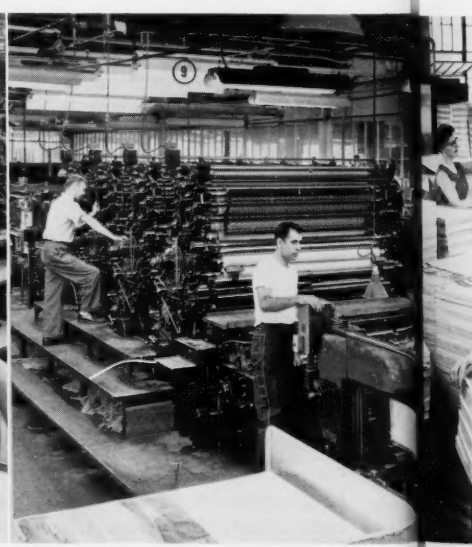
Charles A. Ward heads Brown & Bigelow, which was organized in 1896 by H. H. Bigelow and which now grosses about $50 million a year on the calendar business.

How Brown & Bigelow Offsets P

ONE of the biggest jobs at Brown & Bigelow is production by offset of 600,000 13-sheet calendars for Pan American World Airways. Photos on these pages show some of the highlights in the lithographing of these calendars, which are done in 14 languages for world-wide distribution.

After Pan American photographers had rounded up a batch of color photos in 1953 for the 1955 calendar, a planning conference of top B. & B. officials (1) is held to get the job underway. General direction of the calendar was under R. J. Henderson, B. & B. vice president and H. A. Laird, sales promotion manager of Pan American. Actual production was under supervision of A. O. Werner and L. J. Prudhomme, of the calendar company.

Next, (2) art directors plan layout and copy for the 1955 calendar. Kodachromes chosen for the job are compared with chromocritic viewer (3) for absolute integrity in color values. The company's color camera (4) makes positives and color separations for the Pan-Am job. Greater fidelity in final pictures is assured by retouching of plates



Pan-Am Calendar, Step By Step

(5) after preliminary test run is made at the plant.

Workman hand proves the plates (6) for comparison with Kodachrome originals, and colors are transferred to press plates (7) preparatory to press run. Final inspection is made (8) before huge press runs start, and the job gets underway (9) as Harris press begins run.

After the run has been completed, calendars are glued, sliced and inspected individually (10). Worldwide individual mailing of tubed calendars from company post office completes the order (11).

True-Color Depth, B. & B.'s name for improved color reproduction on calendars, is contrasted with old method (left) in photo (12).

Charles A. Ward, (1.) president and general sales manager of Brown & Bigelow, holds regular offset job while K. B. Priester, senior vice president of the company, displays Tru-Color depth process.

Better color balance is obtained by use of a newly-developed set of masks, using a finer line screen and a fine textured paper stock.★

Economy Inks for the Small Shop

By James Kernan
C. O. Monk, Inc., Philadelphia

OVER the years much has been written and said concerning the economical operation of the lithographic shop. Talks have been delivered on this subject; panels have given opinions on the relative merits of various lithographic economy procedures. However, unfortunately for a great many at least, a number of these written and spoken words, though helpful to the larger shop operators, completely neglect those individuals who are an integral part of the industry — the men who operate the small offset shops; the one and two press businesses which can be found in large numbers throughout the country and which are rapidly becoming very important factors toward transferring new accounts to the lithographic trade.

Small shop operators have sprung up in quantity in recent years and certainly should not be neglected because here is a group which is rapidly bringing to the lithographic business new accounts which, until this time, had shied away from offset for any one of a dozen reasons. Certainly these small-shop operators deserve the recognition of the industry and all the know-how of economical shop operation that can be afforded them.

This article is not designed to offer a completely economical method of operation but merely to put forth suggestions on one phase of that operation — the purchase of inks.

Important Expenditure

Inks, though generally considered a small expenditure in the overall printing job, are nonetheless an expenditure which is necessary and which can be reduced. That is a feature which must necessarily be considered by the small-shop operator if he is to run a profitable business.

How, then, can he reduce this expenditure? How can he eliminate the often costly habit of overestimating the poundage of inks to be used? How can he obtain the colors he needs for those all-too-frequent "rush jobs"?

The answer to these questions and many more can be found very simply by installing a method of ink purchasing which, though not new, still is not practiced widely enough. This is the method of keeping on hand a complete supply of so-called "stock inks."

What are stock inks and how does the use of this method prove more economical to the small-shop operator?

Stock inks may be defined as a line of various shades of primary colors: yellows, reds and blues, as well as a good transparent white, an opaque white, a neutral black and the few necessary varnishes and driers.

By and large, anyone who has worked around presses has a fairly good appreciation of color and the formulation of secondary and tertiary colors. These colors, if matched in his own shop, will receive the same recognition from his customer as though matched by his inkmaker.

How, then, would this method of stock colors fit into a more economical operation?

Typical Example

Take a practical example; a case that is met realistically by small-shop owners every day.

A customer sends in a small job, one he needs in a hurry. It is to be printed with a green ink and will probably require only about three pounds of that ink. The first step is to send the sample to the inkmaker for a match.

Here arise the doubts. "Can it be made in time?" "Will it be a true match?" "Suppose I have underestimated on coverage." Therefore, in order to be sure, five pounds may be ordered, extra ink which very likely will be put on the shelf when the job is finished, never to be opened again.

However, the man who has installed the stock-ink method of operation has only to take from his shelf the proper blue and the proper yellow and mix the correct amount of ink for the job. True, it is necessary to weigh the

(*Continued on Page* 117)

Answering a pressman's need:

Disposable Dampener Roll Covers

Dr. J. F. Dowdall, Chief Chemist
Printing Products Division
Minnesota Mining & Manufacturing Company

Dr. Frank Ireland
Director of Research, Brown and Bigelow, St. Paul, Minn., formerly of Minnesota Mining and Manufacturing Company

THE ROLLER dampening system of the modern offset lithographic press has undergone little basic change in several decades. This system, combining a cloth covered fountain roller, a metal vibrator roller, a molleton covered ductor and two molleton covered dampener rollers, has proven to be widely adaptable to many types of printing.

When the metal vibrator roller and the cloth covers of the other rolls are clean, water transfers from the fountain to the plate, serving to keep the background of the plate clean. When the covers become dirty or greased, water transfer and distribution is no longer uniform and the pressman encounters difficulty in running a clean sheet.

To correct this difficulty, covers must be cleaned or replaced, either operation being time consuming and costly. New cloth covers have a tendency to lint and as they wear down they lose their soft nap, becoming hard. This in turn results in increased plate wear. The need for improved dampener covers to overcome the deficiencies of cloth covers has therefore been apparent.

Other Systems

Other types of dampening systems have been invented and incorporated either into production or experimental presses. Among such systems can be mentioned the Simplex system, in which water and ink are applied through the same form rolls, and the Effuser dampening system which makes use of an air blade to lay down a uniform film of water on the plate surface. The use of these systems has been limited.

The Lithographic Technical Foundation, at one of its annual research meetings, pointed out the need for an inexpensive disposable dampener roll cover and suggested that it should be developed for the lithographic trade. Shortly thereafter the Printing Products Laboratory of Minnesota Mining and Manufacturing Co., St. Paul, Minnesota, initiated research work to produce such a cover. Many constructions were developed and tried. High wet strength papers were treated to render them permanently hydrophilic. Conventional dampener roll covers also were processed to improve their hydrophilic properties. Several other constructions, involving the treatment of absorbent surfaces to render them permanently hydrophilic, were investigated. Some of these were found to perform well, but after much experimentation it was concluded that the most economical disposable cover was an uncalendered pure vegetable parchment paper.

Tried On Presses

All constructions investigated were initially evaluated in the Printing Products Laboratory on duplicating presses and on a 17-by-22-inch press. Finally, several local offset printing concerns (Brown & Bigelow, Colwell Press, E. S. Ferrey & Son, Holden Printing Co., Lund Press, Printing Inc., St. Paul Pioneer Press) and LTF helped to evaluate the vegetable parchment covers. Reactions to parchment covers have generally been very favorable. One of these concerns has used parchment covers exclusively for five months.

A number of pure vegetable parchment papers from different mills were investigated. No appreciable difference was noted in their hydrophilic or oleophobic properties. Several special parchments and high-wet-strength papers were tested and found unsatisfactory for dampener covers, because they accepted ink and did not remain clean during job runs. Studies to date indicate that 45 pound pure vegetable parchment is a useful weight from the standpoint of durability, ease of application and press operation. Runs of more than 100,000 impressions from a single 45 pound parchment cover have been common.

One shop reports that it uses one disposable cover for a whole week on duplicating and job presses. For this reason and also the fact that the 100,000 impressions on the larger presses were considered adequate, most of the testing was done with 45-pound parchment, even though it is possible that longer runs might be obtained with 61-pound parchment.

Cutting the Paper

The parchment cover is cut in the shape of a parallelogram as shown in

the accompanying drawing. The paper is cut with the grain direction parallel to the dampener roll axis to take advantage of the low (two percent) dry-to-wet dimensional change. The cover should wrap twice around the roller and should extend slightly beyond the ends of the roller undercover.

Application

To apply, the precut parchment cover is wet and spread out on a smooth surface. Wrinkles and bubbles are eliminated by wiping with a wet sponge. The parchment then is applied by rolling the dampener roll over the paper. The ends of the sheet should parallel the ends of the roller and should extend slightly beyond the molleton underbase. Preferably the molleton underbase is wet uniformly and leveled by being run on the press for a few revolutions before the parchment is applied. The parallelogram shape provides a point contact between the dampener cover and the plate. This minimizes any tendency to lift the parchment when the dampener roll breaks contact with the plate.

After the cover has been rolled onto the dampener and smoothed so that most of the wrinkles have been eliminated, the roller is placed in the press so that press rotation rolls the cover onto the dampener. The press is run for a few revolutions and the parchment is fastened at each end with a small metal clip. (Fig. 2)

Satisfactory results have been obtained using various kinds of offset plates, inks, fountain solutions, presses and paper during the testing of this paper cover. Grained zinc and aluminum plates, both deep etch and surface, tri-metal plates and "3M" brand presensitized photo offset plates have been run. Conventional oil-oxidizing and solvent-resin type inks have been used. White-etch and bichromated fountain solutions have been used as have a number of coated and offset papers. The covers have been run on presses ranging in size from duplicating machines up to 42-by-58 inches.

This parchment cover has been used with conventional underbase and with rubber rolls covered with a single thickness of molleton. The cover also has been used directly on a roller built to the correct diameter with the same rubber used in the ink form rolls. This latter roller, although less critical for adjusting or setting than the paper-over-molleton arrangement, seems to require closer attention because of the absence of the water supply on the underside of the parchment as ordinarily supplied by the molleton. There is a tendency for the paper to dry out and shrink when the press is not in operation.

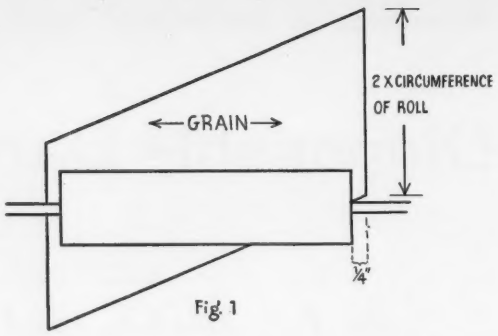


Fig. 1

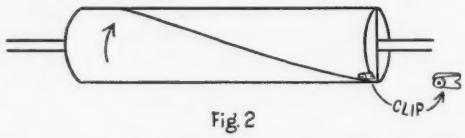


Fig. 2

Advantages

The pure vegetable parchment cover has the following *advantages:*

1. It is inexpensive.
2. Application is simple and fast.
3. Being very preferentially water receptive, parchment remains clean on the press.
4. Dark and light inks can be run interchangeably without changing or cleaning dampeners.
5. Parchment is lint free and provides clean copy without a run-in period.
6. Water is transferred as a surface film; transfer is very uniform and easily maintained.

Disadvantages

The cover has the following *disadvantages* or use techniques which need further development:

1. Application techniques need improvement, particularly for larger presses.
2. The present method requires that the press be backed up carefully.
3. The cover dries out overnight unless kept wet or covered. The resultant shrinkage can reduce roll diameters so that dampener rolls must be reset.
4. Seamless molleton covers must be used to obtain sustained long usage.

Usage Needed

General acceptance of a disposable cover can result only through usage in shops throughout the country. Field experience to date indicates that pure vegetable parchment can serve as a superior, inexpensive dampener roll cover. Minnesota Mining and Manufacturing Co., is happy to make these results of the research effort of its Printing Products Division Laboratory available to the lithographic industry. Appreciation is expressed to those lithographic houses which helped to evaluate this development.

Inquiries

Inquiries concerning disposable dampening roller covers should be addressed to regular lithographic supply dealers of "3M" brand photo offset plates. These dealers have been informed of this development and are in a position to provide lithographers with the information they need if they want to adopt these covers in their plants.★

Research pays Off—

Mechanics of Dry Offset

By Warren G. Buhler

Research and Development Department, American Type Founders, Inc.

AT THE time American Type Founders made the decision to organize a definite research project on dry offset there was little accurate information available. While it was true that there were a lot of answers extant in the industry, it was also true that most of them proved to be of very little value. Even today, the literature of the industry is overflowing with articles from the Ivory Tower Sages, pointing out how long they, as individuals, have been doing dry offset and describing their methods of doing it.

Yet the fact remains that, even from this literature, little has been contributed to the average workman's being able to produce dry offset on a satisfactory basis. At the best, the literature has succeeded only in establishing a greater interest in the process in more places. Thus the research department of American Type Founders was directed to study and resolve the variables attached to the process.

Combination Plate

I am sure you will agree that in order for dry offset to be recognized as a commercial printing medium, it would be necessary to perfect combination printing plate along with line work which is now being successfully done. I will go so far as to say that the photoengraver is the key figure in making this process successful.

After approximately a year and a half of concentrated efforts, and after many trials and tribulations, we can confidently reveal to the industry how to print dry offset. Here are some of the highlights which make for better dry offset printing.

First, we shall deal with the press — American Type Founders manufactures presses in two sizes which are capable of printing wet and dry offset. There are approximately 550 of these machines in the field today. They are known as the Chief 22 which handles a sheet 17 x 22, printed by a plate 20″ x 22⅝″. The Chief 29 is a 22″ x 29″ press which takes a plate 27¼ x 28⅝″. In brief, these machines are precision made production presses. Their plate cylinders are undercut .030. Their form rollers are dynamically and statically balanced and covered with a 31 durometer lithographic compound and precision ground.

Form Roller Journals

The form roller journals are equipped with precision roller bearings which are locked in a precision roller lifting mechanism. This allows the pressman to obtain accurate roller settings which is a requisite to running dry offset. Tolerances throughout the machine have been shortened and all mechanisms balanced to achieve smoothness and ease of operation, resulting in a harmony of mechanical relationships favorable to both wet and dry offset printing.

As for press operation, it is the same as it is for wet offset except that we recommend that the pressman exercise more care in setting the form rollers to the plate. For the best results a ⅛″ or smaller uniform strip across the plate will permit sufficient inking of the printing area of the plate.

Cylinder relationships have always been a matter of speculation and discussion. Consequently, we tackled the problem of attempting to find the proper relationship between plate and blanket cylinders. Using the method of underpacking and overpacking of each cylinder and reading the printed results, led us to arrive at a compatible cylinder relationship of:

Packing the plate cylinder .033
or + .003 overbearer

Packing the blanket cylinder .070
or + .001 underbearer

With the result of .002 printing pressure between cylinders with tolerances of .001 or less in plate and blanket, it is possible to print with less pressure between cylinders. However, with standard supplies as are currently available, the overpacking of the plate cylinder by (.003) and underpacking the blanket (.001) appears to be a good standard compatible relationship.

Before I leave the subject of

presses, I would like to repeat that there are approximately 550 Chiefs in the field capable of printing dry offset and approximately 200 Mann presses or a total of 750 which have undercut cylinders to accommodate heavier plates.

IPI Cooperates

We have been fortunate to have the IPI Division of Interchemical Company cooperate with us in this program. Results, after considerable testing, indicated that a conventional heavy bodied fast setting, lithographic ink more on the letterpress side would be suitable for the process.

We also have reason to believe that ink should not be a deterring factor as we have used different types, and all met the requirements of the job. In other words, like any other process, consideration is to be given to ink capability with respect to rollers, blanket and paper.

Rather than go into a long dissertation on blankets, and in this area some work with manufacturers still will have to be done, we can recommend the use of a hard 78/80 durometer "slik" or smooth surface blanket such as produced by U. S. Rubber. We have also obtained good results from the mercury blanket produced by Rapid Roller Company. The use of improper blankets can result in a serious printing variable; consequently it is important that a smooth hard blanket be used.

Now the "key" to dry offset, which is photo-engraving:

Engravers Help

Much of the platemaking research we did was conducted with the cooperation of photoengravers, with the purpose in mind to solve the production problems of the 120 line combination dry offset plate. What has been done with it, has been carried out in a process of gradual evolution and with considerable individual perspiration.

We knew little about etching techniques or related mechanical requirements for producing an acceptable dry offset plate. The first few plates printed oversized highlight dots. After much investigating, we determined what gave rise to this condition. It was the shoulder around the tops of the dots that filled in, thus printed and gave rise to distortion of tone values. We had other trouble with highlight dots and screen areas. These difficulties prompted us to start from the beginning, thus reviewing the copy and halftone negatives. We charted and determined their related effect to the plate and end product.

As we improved our etching techniques, we found that dependent upon what the customer wants the photoengraver is free to use his standard negative, with consideration being given to the limitations of facilities and etchers' techniques to obtain the desired results.

This article is based on a talk given by Mr. Buhler at the 58th annual convention of the American Photoengravers Association last fall.

May I digress for a moment to mention that if a photoengraver is to enjoy the fruits of dry offset printing he should be qualified to answer all questions and demonstrate the process. This entails knowing pressmanship and supplies and being able to deal with and help the printer resolve the mechanical and physical variables attached to the process.

Only conventional or standard techniques of etching with standard machines and supplies were used. Actually there is little new for the platemaker to learn which is not now applied in making fine photoengravings. It may be resolved that all steps in processing of dry offset plates point to care and a knowledge of the desired results.

Special Techniques

It is reasonable to assume that our suggested procedure and specifications may be contested for the reason that etchers have their own special techniques or reasons for following a special shop procedure. However, the following was arrived at through tests and experimentation. This represents accumulated, composite results.

In our tests we used metal, ranging in thickness from .024 to .032 in thickness with no limitations as to type of metal. The two metals which served our purpose best were soft zinc and magnesium. Both these metals lend themselves to the mechanical aspect of the process, provided the total thickness tolerance does not exceed $\pm$ .001 over the entire surface. Those metal manufacturers with whom we have been dealing are aware of the necessary tolerances, thus, if you specify that the material is to be used for dry offset you will receive, in zinc .028 thick plate $\pm$ .001 or in magnesium .025 $\pm$ .001 or better.

As for cleaning the plate, any acceptable method of cleaning many be used.

The etching technique is fairly simple. As most dry offset work will be done with plates .025 (magnesium) or .028 (zinc), a bottom etched depth of .006 to .008 in the open areas is favorable. This allows sufficient base metal to "hold" the image areas securely without the possibility of stretch or distortion under tension. It was found that as the base metal thickness becomes less and less through deeper etching, it is difficult to draw the image areas tight to the cylinder. The combination of a thin base with full metal thickness in solids and halftone may result in local buckling at these points. This will give rise to improper cylinder contact and excessive printing pressure at the edges of the image.

Etching Is Critical

Halftone etching is more critical for the reason that the first flat etch must be to a depth of .0025/.003. This is done to eliminate the high shoulder, which if not entirely nonexistent, would have a tendency to print. The minimum highlight dot should be as small as possible and the highlight to middletone areas should have maximum tone scale contrast. The shadow area dots should be pinpoint, open and hard. To obtain the open area depth of .006/.008 the plate is powdered and halftone areas are painted out after the first flat etch.

In order to accomplish this we found that the etcher must know exactly the strength of his etchant and calculate the etching ability of

(*Continued on Page* 117)

Hedgehopping pays off:

NAPL Plane Trip Wins New Members

In the plane: Rex G. Howard, president of the Howard Co., Peoria Ill. and president of NAPL, (l.) with Frank R. Turner Jr. and Robert S. Emslie Jr., of the association staff, as they prepared to take off on the 7,500-mile trip.

A DRAMATIC hedge-hopping airplane trip in the Southwest by three NAPL staff members last month netted 41 new memberships in the organization.

Rex G. Howard, president of the National Association of Photo-Lithographers, piloted his small plane with Frank R. Turner, Jr., and Robert S. Emslie, Jr., of the NAPL staff as passengers. The men took off from St. Louis and secured the new members in consecutive visits to Tulsa (five members), Fort Worth (7), El Paso (1), Long Beach, Cal. (2) and San Francisco, where the remainder were obtained.

The three-week trip, still in progress at presstime,

(*Continued on Page* 107)

Sell *Color* To Beat *Color TV*

IN AN EDITORIAL discussion in *Motion Picture Herald*, it was admitted recently that, with fewer than 250 sets in operation, color television at present does not pose a threat to the movies, but this significant statement is added: "Five years from now it will be a different story!"

So far television has been a blessing, not a blight, to the lithographer, making new work for him wherever it has gone. However, the coming of color TV may pose a real threat to color printing. When a manufacturer's product can be pictured in color on the screen in the homes of the nation, will this same manufacturer be willing to spend as much for color printing as he does now?

250 Sets

With these fewer than 250 sets in operation and with the size of the screen limited to 12½ inches (back to where television began), color TV certainly is no threat to any medium of advertising at present. However few will deny that the motion picture operators have real reason to be alarmed about the ultimate impact of color TV on the public.

What do motion picture operators propose to do in the next five years in anticipation of the coming of color TV? The *Motion Picture Herald* says, "We have fine color on the theater screen now—we have CinemaScope and other wide screen devices." Then its suggests with emphasis: "Sell your color in the new dimensions — and hammer it home!"

So motion picture operators are being told that the more they can improve their color offerings now both in quality and volume the better will be their competitive position five years from now. Isn't this good advice to lithographers too, if they recognize color TV as a possible threat to color printing. Might we not say too: "Sell the color printing, in quality and quantity, your plant is capable of producing—and hammer it home!"

Costs Are High

"But," says the offset printer, "color separations are very high and color offset plates still cost a great deal of money to make."

Likewise copper plates for letterpress color are expensive.

Advertising men predict that a new model automobile, for example, probably will be shown across the nation by color TV much cheaper than an equal presentation to the public could be made by color printing.

Apparently the graphic arts will have to use the five years of grace in cutting the cost of color separations and plates in preparation for this new competition.

Will this be any greater task than that of television set manufacturers who must bring the color screen size up to that of the present black and white set and surely will have to

By P.R. Russell

Staff Correspondent

bring the $1000 price down considerably if the sets are to be widely sold? Better not gamble on R. C. A., Westinghouse, and others not being able to do that!

Same Customers

The same commercial interests that will pay for color TV are the present best customers for advertising by offset in one color or in multiple colors. This narrows the field of effort if the lithographers will do something about it. The suggestions that follow relate particularly to local, rather than national, offset advertising and commercial work.

"Sell color with color—hammer it home!"

1. Nearly any piece of advertising or promotional work you may be about to do would be more effective in an appropriate color. Why not do a bit of color missionary work by showing the customer a proof of the job in that color? Use your proof press more and charge the expense of using it to business promotion. Study every job to see how it could be improved by the use of color.

Keep Tint Block Handy

Keep tint blocks handy and demonstrate the effect of a second *spot* color on a planned one-color job. Offset printers can't do these things as cheaply as the letterpress printer can, but they can do some of it. Proofing can be done with smaller plates on smaller offset presses. Satisfactory color proofs are being produced on the smallest multilith.

Two color printing seldom requires color separations and even three-color printing can be had without it. Both offset and letterpress printers will readily admit that they have not yet begun to exhaust the possibilities of color printing by the processes at their command.

The alert printing salesman who "hammers home" the effectiveness of color printing on a local level will be in the best possible position competitively when color television does come into its own as an advertising medium. He will not be if he fails to use the brief grace time allowed.

A Tip from the Movies

2. If you visit your local movie theater even occasionally, you see the elaborate printing used to advertise important, first-run films. Metro-Goldwyn-Mayer and Universal Pictures are leaders in having these color-printed "stills" produced for the lobby displays of the theaters throughout the country. "Use color to sell color" is the policy of these exhibitors.

Why not lithographers use "color to sell color?" When an attractive piece of color work is done for one customer, why not produce enough extra copies to show other prospects for color work what you are doing and impress them with the possibilities of color?

Actually, you can visit offset houses that do color work and you wont' find displays of it where they can be seen by customers or prospects who may come in. If a customer who is interested in color printing comes in, make it as easy as possible for him to see samples of your work. Don't wait for him to ask to see. He may infer that you do not have samples that you want him to see.

Promotion Helps

Get out as many color promotional pieces of your own as you can afford and mail to your customer list. "Sell color with color." When you use it yourself, you reveal confidence in what you are trying to sell to others.

The 1954 Printing Exhibition of the Southern Graphic Arts Association, staged at Orlando, Fla., May 7-9, one of the largest exhibitions of printing, both offset and letterpress shown anywhere in the country, this year had 1600 entries as compared with 1300 in 1953. More than 95 percent of these specimens, coming from the central section of the country as well as from the South and West, are in color.

Any local printing group in any city in the area represented can have this entire exhibition for a local showing at the cost of shipping and handling only. Wouldn't it help in any local situation to exhibit all this high-quality printing—with emphasis on color? Lithographers better act while they can to get the competitive jump on the up-and-coming color television.★

What will the lithographer's answer be if advertisers find that they can show their products across the nation through color TV cheaper than by using color offset?

Just a few of the thousands of visitors who toured the New York Employing Printers' Association exhibition of printing which was on display during Printing Week at the Hotel Biltmore, New York. The display was one of the highlights of the city's observance.

Lithographers Take Big Part In Printing Week Celebration

LITHOGRAPHERS and lithography in all parts of the United States contributed greatly last month to the most successful Printing Week observance ever held. In large cities and small, they used their time and their products in a celebration that was hailed as "the greatest graphic arts industrial public relations effort in history." At presstime it was reported that at least 150 cities had taken part, almost double the number of previous years.

Notably on the increase throughout the nation were proclamations and Printing Week messages issued to the public by government officials. Included in these proclamations were messages from President Eisenhower and many from the state governors and local mayors and city managers.

On the increase too, was newspaper coverage of International Printing Week in every phase of its many activities locally and internationally. In many of the smaller cities, the Printing Week effort was a project of the local weekly newspaper and job shop. For the first time too, "Miss 1955 Printing Week", who was Dorothy Malone of Warner Bros. Studios, was shown to the public in four colors in magazine sections of several of the largest newspapers in the country. Special supplements, sections, and pages in newspapers throughout those cities having local observances were devoted to the International Printing Week effort and to telling the local populace of the importance of the graphic arts.

Radio and television participation increased substantially over the nation with an interesting increase showing in the amount of radio and television time bought and paid for by local printing concerns to promote the International Printing Week effort. Radio and television spot announcements especially were on the increase. In nation-wide television broadcasting, the Hallmark "Hall of Fame" show on Sunday, Jan. 16, gave a big boost to the (PW) program.

The importance of printing educators in the secondary schools, colleges, and universities was obvious in the 1955 Printing Week progress report. In a great many areas where no Printing Week efforts had been made previously, the spark plug of the new 1955 effort often came from the people engaged in printing education, the PW committee reported.

Industry people in these new cities were very quick to cooperate.

In an entirely new area, the Printing Week story was told and promoted in Puerto Rico by Manuel Rivas Olivero of the Economic Development Administration. The 1955 effort in Puerto Rico was described as "just a good start," but the 1956 plans call for extensive development.

Paralleling industrial development in other fields, sections of the South showed greatly increased participation in the 1955 Printing Week effort. Especially was this true in the southeastern section of the country. While the large cities continued to improve and expand already extensive Printing Week programs, the great gains for the industry and for the International Printing Week program seemed to come from the medium size and smaller cities.

The promotion of the 1955 observance was the greatest in history. It began in April 1954 and was built in progressive stages through the week of the observance itself.

Introduction of the "International Printing Week Bulletin" into the promotional effort was felt to be the strongest contribution of a great many new ideas and methods used.

In New York City, 65 graphic arts groups cooperated in the Printing Week observance. In Chicago, more than 40 printing industry organizations joined together to promote "Printing Week In Chicago". In Boston, 50 printing trade organizations joined together to sponsor Printing and Publishing Week in New England. In Cleveland and Philadelphia, nearly 30 trade groups in each city made 1955 Printing Week the biggest on record. Along the West Coast in Seattle, Portland, San Francisco and Los Angeles, printing groups of every kind joined together to show an unprecedented increase in the activities in cities of all sizes.

Through the Middle West, Duluth, Superior, St. Paul, and Minneapolis were leaders in the Printing Week promotion and the Duluth-Superior Craftsmen carried the story into scores of smaller cities in Northern Wisconsin and Minnesota. St. Louis, Kansas City, Omaha, Topeka and Wichita reported notable progress and increased activities.

In the South, Tulsa, Oklahoma City, Fort Worth, San Antonio and New Orleans were the leaders in greatly expanded 1955 activities. In the Southeast, many cities in North Carolina and Florida took up the Printing Week effort for the first time.

THE WHITE HOUSE
WASHINGTON

January 5, 1955

Dear Mr. Taylor:

On the observance of Printing Week, 1955, I should like to express to all members of the great American printing industry my congratulations on their contributions to its development, and on their high standards of performance. This is an occasion for renewed dedication to the service of a press which is free, vigorous, fearless. For upon open and outspoken discussion depends discovery of the truth. Upon communication among individuals depends the sympathy which enables them to live as neighbors. Upon communication among peoples depends the understanding which leads to peace among nations.

In our times, when truth and falsehood grapple on the battleground of human minds, I know the members of your industry will do their essential part in responding to this challenge.

Sincerely,

Dwight D. Eisenhower

In Virginia, a state-wide observance was one of the finest in the nation, according to the committee. The Virginia Printing Week activities were under the direction of Walter G. Sulzer, chairman, Richmond Club of Printing House Craftsmen; James T. Lewis, Richmond Printers Association; and Edwin O. Meyer of the Virginia State Printers Association and the Virginia Press Association. Printing Week activities were held in twelve Virginia cities.

Litho clubs, Craftsmen's clubs, local PIA groups, silk screen chapters, trade unions, ad clubs, press clubs, local supplymen's guilds, education groups, etc., held special Printing Week meetings in many cities. It is estimated that at least 500 Printing Week talks were made to local service clubs such as Rotary, Kiwanis, and Lions. Talks reaching well over the 500 mark were given by printers to high school printing and journalism classes or to entire school assembly groups. In the Los Angeles area alone, more than 100 such talks were scheduled and in Chicago, well over half that number was reached.

The program of exhibits of printing, window displays, lobby and reception room displays and the like was headed by the excellent "13th Exhibition of Printing" by the New

(*Continued on Page* 107)

Man of the Year: Thomas E. Dewey, former governor of New York (r.), receives Franklin award for distinguished service from New York Employing Printers Association at Printing Week dinner. Charles E. Schatvet, chairman of the board of NYEPA, makes the presentation.

PHOTOGRAPHIC Clinic

By Herbert P. Paschel
Graphic Arts Consultant

Has the Photographic Clinic helped you with your camera problems? This department was started several months ago to provide an additional service to our readers. Now that you have had a chance to read it for a few months, how about telling us what you think of it. Would you like it to continue as a regular monthly feature? And by the way, are there camera problems plaguing the man in your shop? If so, send them along to Herbert P. Paschel, c/o Modern Lithography, Box 31, Caldwell, N. J. *He'll answer them in this column.*

Q: Can you explain what could cause continuous-tone separation negatives to vary in density from one side of the plate to the other?—J. K. L., Newark, New Jersey.

A: This condition may be due to one or more causes acting separately or in combination. The defect may be classified into two categories—uniform and non-uniform. When the density variation is repeated in exactly the same way in all negatives of a set, the defect can usually be attributed to an unevenness in the strength or color temperature, or both, of the illumination on the copyboard. A static difference in the output of arc lamps is generally caused by a defective lamp mechanism, inadequate line voltage, defective carbons or wrong carbon combinations. A difference in light strength alone may be due merely to improper placement of the lamps.

When the density variation is different for each negative in regard to both orientation and intensity, the matter is much more complex. One possible cause is a combination of defective lamps and excessive power line fluctuation. The latter may be due to inadequate wiring or overloaded lines. I recently investigated a plant problem involving uneven negatives where the copy was illuminated by a pair of double-decker lamps. At a certain line voltage the output of the four lamps was reasonably identical. However, when the voltage increased or dropped, each lamp burned at a different intensity and color temperature and the difference between lamps varied with changes in the input voltage. Thus, during the time a set of separation negatives was being photographed, line fluctuation changed the output of the lamps so that the illumination of the copy was substantially different for each negative.

Other contributing causes for uneven negatives are—uneven development and lack of uniformity in developing technique, defective filters and lenses, obstructions in the optical path and extraneous light striking the copyboard and/or lens. The first step in tracking down the exact cause in your case should be to check the intensity and color temperature output of the arc lamps. To do this you can use any one of the many exposure meters and color temperature meters now available from most photographic stores. When the exact cause is found the correction will suggest itself.

Q: Our arc lamps do not always burn with the same brightness and color and we have often made serious errors in exposure. Would an electronic exposure control help us cut down on exposure errors? —J. S., Hartford, Conn.

A: From your description of the functioning of your arc lamps I would assume that they are very much defective and either need repair or replacement. When arc lamps are defective you can not expect an exposure control to compensate fully for extreme variations in light output. If your lamps varied only in intensity the chances are that a significant improvement would be noted after installing an exposure control. Unfortunately, variations in arc lamp output are in two directions—intensity and color temperature. An exposure control stabilizes exposures by varying exposure time in accordance with changes in the amount of light on the copyboard. When the illumination variations involve two factors, the exposure control can not fully compensate and thus is subject to error. In your case the full effectiveness of an exposure control would never be realized. First overcome the illumination problem. When that is accomplished, you can obtain optimum exposure accuracy by means of the control. (See also, the previous question and answer.)

Q: What is the purpose of a 3-point register frame?—A. C. A., Baltimore.

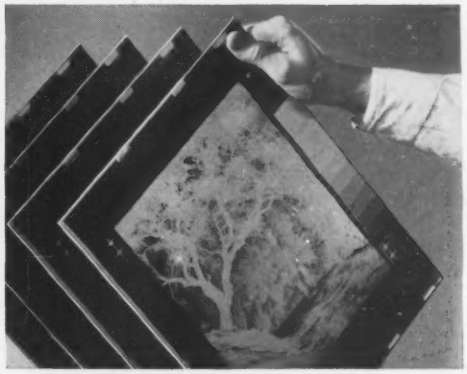
A: A 3-point register frame or bar is a device whereby it becomes pos-

(*Continued on Page* 113)

Kodak

News for Lithographers

Something for everyone ... *everything* for you



Chances are you are so used to your favorite Kodak plate that you may not realize what a wide range of different plates for specific jobs we make.

Continuous-tone plates

Take contrast most appropriate to type of copy, for instance. Here's how our most popular panchromatic separation plates stack up for reproducing everything from a wash drawing to a sparkling transparency:

Continuous-Tone Plate	*Contrast*	*Type of Copy*
Kodak Panchromatic	highest	low-contrast
Kodak Separation Negative, Type 1	medium	medium-contrast
Kodak Tri-X Panchromatic	lowest	high-contrast

Just to elaborate a little, the Panchromatic plates have just the right speed and contrast for low-contrast wash drawings and water colors. Depending on the developer, the Separation Negative plates give you an extremely wide middle range. And the Tri-X plates are perfect for low-contrast masking.

If continuous-tone positives are desired, Kodak 33 Plates—regular or matte—can't be beat. They're ideal for "overlay" masking, too.

Line and halftone plates

Here's how the line and halftone plates stack up:

Line and Halftone Plate	*Speed*	*Used for*
Kodalith Ortho	slow	line and halftone negatives or positives
Kodaline Contrast Process Ortho	fast	
Kodalith Pan	slow	direct screen separations
Kodaline C.T.C.	fast	

The Kodalith plates are intended for general, all-round use, and the Kodaline plates only where extremely high speed is necessary.

For very special jobs

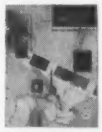
The above are just *part* of the still broader line of Kodak plates. The rest—including Kodak Super Ortho-Press, Kodak Autopositive, and Kodak Infrared-Sensitive Plates—are all designed for very special jobs. But no matter what Kodak plate you use, you can always be sure of *uniformity*—plate to plate, box to box.

Your Kodak dealer and technical representative are always ready to add their specialized knowledge to your own experience with Kodak products. And *Kodak Materials for the Graphic Arts* gives you sound, basic data on our complete line of products for lithographers.

For *best* results . . .

with Kodak plates and films, take advantage of the benefits you get by using Kodak chemicals. Kodalith Developer, for example, has excellent tray life *with no sacrifice of dot quality or contrast.* And, to help you get the best results consistently, *each* batch of *every* Kodak chemical is subjected to literally dozens of exacting tests.

This book can help you *two* ways:



Kodak Materials for the Graphic Arts is, first of all, a handy catalog of our products—giving characteristics, processing data, sizes available, and the like. Secondly, it is a helpful guide full of suggestions on what to use and how to use it for almost any job you'll get.

If you don't have a copy, ask your Kodak graphic arts dealer or write us for one.

Graphic Reproduction Division • EASTMAN KODAK COMPANY, ROCHESTER 4, N. Y.

Lithographers—

Ever Try a Budget?

Here's the story of one test that really worked

OUR plant is a combination offset-letterpress plant with complete composing room, bindery and mailing facilities. Our factory personnel number from 125 to 150.

A "budget" in a the sense we use it at our plant is not the somewhat rigid and formal specimen. Instead, it is nothing more than a planned goal or yard-stick by which the various categories of income and expense are measured, compared and controlled. At our present stage of budget work, no single person is held responsible for the attainment of the budget; there are no individual bonuses or monetary incentives for attainment. We are comparatively new at budgetary work and are moving slowly educating ourselves as we proceed. We are learning that there are very definite and worthwhile benefits to be derived from a budgetary set-up. We now can pretty well separate the practical, attainable realities from the wishful "dream budgets." In another year or two we plan to set down a more formal budget and spell out responsibilities for achievement.

Plan Is Needed

Ours is no more than a simple, practical plan of operations detailed into the many segments of activity that are used in the production of a printed piece. We all know that any project, whether it be a business venture, a competitive sport or a personal goal, has a much better chance for success if there is a plan. My firm has merely attempted to set down a "plan." What is the desired goal? What efforts are necessary—human and material? What are the desired lines of movement toward the objective? What are the alternative lines of movement if deflections crop up? What are the reasonably expected results?

Preparation of a Budget

The first several budgets we set up were anything but encouraging when compared with actual results. We were convinced that the historical records, on which the major portion of our initial budget was based, were completely screwy. However, each budget revision came easier; bugs were ironed out; omissions and duplications were detected and corrected. After our fourth six-month budget period we began to have faith in our budgets and about that same time we began seeing some favorable improvements in our operation, particularly from a cost angle.

In the preparation of a sales budget we study many details, but three major considerations cover 90 per cent of the facts used:

1. Individual salesmen's performance records.
2. Cost center budgets.
3. Approximate total sales required to produce a reasonable, attainable profit.

We first study the previous period's record of each salesman detailed as to:

(a) Sales by Customer, (b) Sales by Process, (c) Relationship of "Plant Sales" to "Billed Sales", (d) Profitableness of various categories of work—publications and other repeat volume as compared with spot work.

In the case of a younger salesman a valid consideration is the possible added volume which could be expected simply because of another six months or year's experience.

Next, we carefully adjust each salesman's previous period's volume for sizeable repeat volume acquired in the latter half of the period. Conversely, we consider sizeable volume losses during the past period.

What Volume?

Being satisfied with the individual salesmen's capabilities for the coming period our next problem is what volume do we need in total? For the answer to this we go to our previously prepared cost center budget where each center's sales are budgeted on the basis of desired shift operation and productivity of men and machines. By the application of past experience ratios of materials and outside purchases to billed sales, as well as mark-ups, etc., the cost center sales budget is converted into a total "billed sales" goal, or budget.

What about the local market situation for the coming period? For this we lean quite heavily on salesmen's analyses and forecasts of their accounts, one by one. Of course, any other local information available of a type which will aid in our prognostications, is used.

National economic conditions? Well we do make some effort to analyze the "guesses" of various economists; then we make our own guess. And, finally, we give consideration to anticipated equipment changes and the effect of such changes on sales.

After all these facts, statistics and opinions are thoroughly studied, discussed and hashed over several times, the general manager and sales manager break down the total sales into individual salesman's quotas and the

toughest phase of any budget, in our opinion, is complete—the sales budget.

Before I discuss our use of the sales budget, I might mention the fact that the statistics accumulated on sales, i.e., sales by process, by customer, by salesman, by type of job, and by profit, including the typing of reports, cost us less than $22 monthly. Our accounting department is not mechanized beyond the usual adding machines and calculating equipment.

Sales Analysis

We average 300 jobs a month and for each job billed a sales analysis card is prepared from the cost sheet. McBee Keysort is used for this purpose, as well as for many other purposes in our office. On the face of the card is noted: sales price, cost, profit or loss, plant sales, quantity, brief description of job and job number. Around the edge of the card the following is cut: Offset or letterpress, publication or other, customer code number, salesman's code number, profit or loss range, invoice number and invoice date. Once this information is on the card, we have an extremely valuable record. At any given time, for any given period it becomes a rather simple task to sort and re-sort the cards for any desired category of information. If we were not interested at all in budgetary control we would still consider this information highly desirable and worth many times its cost to prepare.

Now you could ask, "So you have a lot of information. What happens to it?" As I have mentioned, monthly reports of sales are prepared by salesman, by customer, by process, etc. These facts are reported for the month and year-to-date totals for both actual results and per budget. Copies are furnished to individual salesmen for their respective portions of the report only. Summary reports go to sales manager and general manager. In analyzing variances not too much time is given to a single month's report, but major study is given to the "year-to-date" figures.

Quota Not Enough

It is not enough to know just that a salesman is making his quota. What is the make-up of his sales by customer? Has he picked up a nice new account and dropped one of his old stand-bys, thus being left in the same relative position to the budget? And, of course, the proper volume without the proper profit isn't acceptable. How's the profit picture by salesmen? By customer? What about offset as opposed to letterpress sales? Repeat volume—holding its own or is it improving and spot job volume dropping off?

Let's look at our cost center budget sales. Are sales balanced over the

By Ralph E. Murphy

Darby Printing Co.

operating centers as planned or is the Harris 35 x 45 TC Offset running into overtime while our Miller TC is averaging 25 per cent off in sales from budget?

Special attention is given to the sagging areas and plans are made to exert our efforts toward immediate remedial action whenever and wherever possible. Likewise, in areas that have exceeded our budget, we attempt to develop the reasons therefore and see if we can push the advantage even further.

Obviously there are areas and times when nothing can be done and despite our study and discussion there is little hope for the immediate pick-up of a sagging sales area. Even so, we believe our time has been well spent in that, at least we know rather exactingly just where we are in our sales effort and why we are there.

Cost Budget

As any of you who have had experience in cost and/or budget work know, a multitude of facts and details go into the preparation of a cost budget. Here is how we put our cost budget to use and some of the benefits we are deriving from its use.

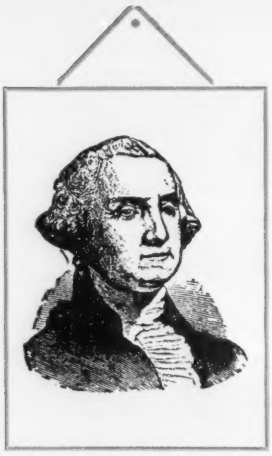
By the 12th of each month, we prepare what we refer to as a "budget report" for the previous month's operations. A page is included for each cost center divided into four columns: this month, budget and actual; and year-to-date, budget and actual. Each of the major cost categories—wages, rent, depreciation, direct dept. expenses and overhead—are entered in each column. Chargeable hours are entered and cost per chargeable hour computed. Before us we have for each cost center an hourly rate for the past month's operations as well as the year-to-date cumulative results — both compared with our budgeted hourly rate. Inasmuch as the same comparisons appear for the separate items of the total costs for the center, it is usually comparatively simple to spot the expense category which brought about the hourly rate variance.

As I mentioned in discussing our sales budget, our cost budget thus far is not one that, for example, tells a letterpress foreman: "Our sales manager is being held responsible for putting X number of hours on your presses. You in turn may not exceed X dollars in wages; your repairs and maintenance must not exceed X dollars, etc."! The day is not far hence we believe, when we will tell our foremen approximately that. However, at present they are merely given the budget as a guide; something to shoot at. We have had some highly encouraging experience with our foremen in that they are making every effort to stay within the budget limitations.

By noon of each day we report to each foreman and to the general manager, by cost center, the previous days sales and wage comparisons to the budget. On the same report are also the month-to-date results. This simple little report has done a rather remarkable job for us. Whereas in the past we furnished similar information about three weeks after a period ended when it was merely interesting, and often depressing, history—we now see the trend daily and more often than not can plug the dike while the stream spouting through is still small.

Our direct departmental expenses and supplies control has likewise

(*Continued on Page* 111)



HAPPY BIRTHDAY

to

Two Great Leaders

The quality of leadership is highly respected in the two men whose birthdays are celebrated this month. Leadership demands of an individual or a company, a keen sense of duty, pride in a job well done, and a compulsion to make the best plans and give the most service to those to whom they are accountable.

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Metal Decorators toast new trend:

Wine in Cans

By Elsa Gidlow
Staff Correspondent

THE FIRST wine ever to be marketed in cans went on sale in California in December. It is called Carina Kan-O-Wine and is put out by Yosemite Winery Association, made up of a membership of 125 grape growers producing an average of one and a half million gallons of wine annually.

The package is a cone-topped, crown-capped lithographed can containing 12 fluid ounces. The cans have "flavor-protecting wax linings," according to winery spokesmen. They are very colorful and decorative, showing bunches of purple and white grapes on identical front and back faces, with the "Carina" trade mark in red letters on a white heart, and the wine type also in red. Other colors used are green, dark blue, light blue and pale green, with a predominantly white background.

Three Companies

Contributing to the new marketing venture are Continental Can Co., San Francisco, which supplies the cans; Western Crown Cork & Seal Corp., which makes the caps; and Schmidt Lithograph Co., which lithographs the cartons in which the cans are packaged.

A side panel on the can "sells" the package as well as the product: "Carina Kan-O-Wine is the greatest advancement in wine packaging since the glass bottle" the panel text reads. "Flavor-protected, easy to carry, quick to chill, unbreakable, dripless, light-proof", it happily boasts. Breaking another wine industry tradition the label suggests, "For a new taste thrill chill before serving."

The wines sold in the cans are sherry, port, tokay, white port, and muscatel. Six of the cans are packed in a carry-home carton designed and supplied by Schmidt.

Idea behind the package is that it will help develop an entirely new market for California appetizer and dessert wines. Because of the unique packaging, the winery people predict, Carina Kan-O-Wine's greatest appeal will be to the housewife who does not now buy wine regularly. Other non-users also are seen as good market prospects.

Lighter Than Glass

Retailers are expected to like it because of ease of handling. The

(*Continued on Page* 119)

Some factors that influence

Adhesion of Organic Coatings To Plate Surfaces

By C. H. Groff

Watson-Standard Co.

THE adhesion of organic coatings to tinplate and blackplate surfaces is a difficult subject because of differences of opinion of a good definition for adhesion. The property of adhesion is so inter-related with cohesion, hardness, flexibility and other physical properties of the film, that although many methods and devices have been used in attempts to measure this property, none have been completely successful.

For the purpose of this discussion it is intended to refer to adhesion from the standpoint of the results obtained from coated plate as related to fabrication, abrasion resistance and other characteristics required of a satisfactory litho coating.

Mechanical adhesion of a coating to a metal surface is a familiar phenomenon. Steel is commonly sandblasted to provide a clean, roughened surface in order to increase the mechanical adhesion. Many metal surfaces are also etched not only to provide a fresh clean metal surface, but also for the roughening effect.

From Electrical Energy

Another factor of adhesion, which does not appear to have been given as much attention as the mechanical phase, is the adhesion which is believed to result from the electrical energy created by the metal or other substrate giving free electrons to the coating. This energy appears to be a force of considerable magnitude.

To illustrate the extent of these electrical forces of adhesion, the following experiments can be cited: A sheet of stainless steel was prepared and cleaned by polishing to a bright gloss and immersing it in aqua regia for sixty seconds. Unlubricated polystyrene was compression molded against this steel plate which was electrically grounded. On removal from the press, this metal-plastic laminate was shown to have a very mild electrostatic charge on the surface of the plastic which was detected by an electrometer. This charge was easily eliminated by the use of a destaticizer on the exposed polystyrene surface. The polystyrene-steel laminate was then again grounded and the plastic was stripped from the metal. Immediately a very high charge was detected on the surface of the newly exposed plastic which had been at the plastic-metal interface.

No Charge

It is also worthy of note that when the above experiment was repeated using excessively lubricated polystyrene, practically no charge was detected, probably because the lubricant prevented intimate contact of the plastic with the metal. A toluene solution of polystyrene was then cast on a glass plate. No appreciable charge existed on the 0.002 inch thick dry film as long as it remained on the glass. However, when the film was stripped, a definite charge was detected. (1)

The adhesion of various types of organic coatings has been shown to be affected to different degrees by variations in plate surfaces. These variations, which include the amount and type of lubricant used, have also been reviewed. (2)

Organic Coatings

Certain types of organic coatings are more sensitive than others to these variations and display varying degrees of adhesion to different plates. The variations in adhesion, obtained with the sensitive type coatings are often manifested by inconsistent performance as related to fabrication, abrasion resistance and other properties required for the manufacture of screw caps, crowns, side seal closures, can ends, and other fabricated articles. It has been demonstrated that certain type coatings may be entirely satisfactory on one plate, and exhibit complete failure when a different plate is coated.

It has also been shown that vinyl co-polymer type finishes may exhibit extreme sensitivity to various plate surfaces, even to the extent of complete loss of adhesion. (2)

It appears then, that the electrical forces associated with the adhesion of a coating to a metal surface, contribute substantially to the ability of the coating to remain intact, on the metal, during subsequent fabrication and manufacturing operations. It is also very likely that poor adhesion experienced on excessively oily plate can be attributed at least in part, to the prevention of intimate contact of the coating with the metal, thereby not only lessening mechanical adhesion but resulting in the loss of the electrical forces of adhesion.

Sensitivity Overcome

In recent years, this sensitivity has been overcome, in large measure, by the use of certain additives in con-

Paper presented at annual meeting of National Metal Decorators Association, Atlantic City, October 4-6, 1954.

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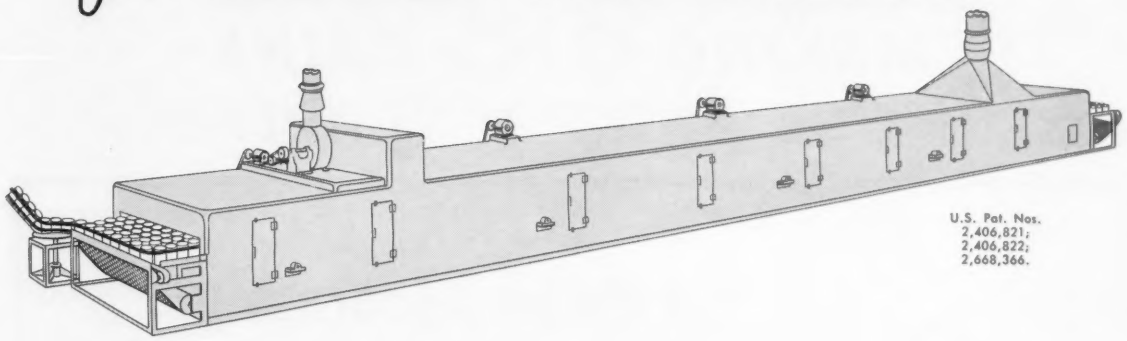

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junction with the reactive type vinyl co-polymer resins containing carboxyl and/or hydroxyl groups. These additives are usually selected from the urea, melamine, and phenolic types together with varying amounts of epoxy type resins. Chemical reaction occurs during the baking cycle and results in cross linking of the vinyl chains. (3) The cross linked vinyls exhibit improved adhesion and appear to be less sensitive to variations in plate surface conditions. In addition to improved adhesion, the thermo-setting properties of such modified vinyl films result in less "wicket marking" or "ghosting", improved chemical resistance, and better resistance to steam processing, sterilization, and pasteurization. Adhesion has been improved sufficiently over various plate surfaces, that in many cases the elimination of a size is possible and good fabrication can be obtained. (4) This is not generally recommended commercially, however, since the size coating provides additional insurance, particularly when the coating is for use on the inside of a closure or container.

It is also worthy of mention that the cross-linked vinyls exhibit much better heat stability than the older type vinyls and are therefore not as sensitive to thermal decomposition caused by overbaking.

In recent years, considerable work has been done with cross linked vinyl sizes with good results. These show excellent adhesion to most plate surfaces and are not overly sensitive to varying plate surface conditions. They are versatile enough to be used under cross linked vinyls, vinyl-alkyds, alkyds, and epoxy ester litho coatings.

Vinyl Resins

The hydroxyl-containing vinyl resins, because of their greater compatibility with other film formers, have been used extensively in vinyl-alkyd type litho coatings. Here the good properties of certain alkyds in displaying little adhesion sensitivity to varying plate conditions, can be retained in the vinyl-alkyd coating. The resultant finishes are quite versatile, and have been used successfully over various plate surfaces and various sizes. Incidentally, a widely used system consists of a cross linked vinyl size and a vinyl-alkyd base white. This system has been used extensively in the closure field because of its good all-around general properties of fabrication, tumbling resistance and processing resistance.

In the past several years, extensive work has been done with the epoxy resins for specialized litho coatings. The epoxy resins when used as thermosetting solutions are usually cross linked or cured with urea, melamine, phenolic or polyamide resins or a combination of these. The resultant cross linked films show good adhesion to a variety of plate surfaces and in some specialized cases have been used as finishing varnishes, gold lacquers, and size coatings. These finishes display outstanding chemical and solvent resistance.

Epoxy Resin Esters

The epoxy resin esters have been used extensively in litho coatings as white base coatings, gold lacquers, and finishing varnishes. Considerable formulation of "R" enamels and "C" enamels from epoxy esters has been done. In general, the adhesion of the epoxy esters to various plate surfaces is good and this coupled with excellent fabrication, toughness, color retention and chemical resistance has assured this type coating a substantial usage in metal-litho coatings. (5) However, some difficulty with adhesion to certain matte finish tinplates has been encountered.

More recently, co-polymer resins of the alkyd polyester type have shown considerable promise in litho coatings. They display good adhesion over various plate surfaces, and can be formulated into base coatings and finishing varnishes which show outstanding color and color retention, good fabrication, excellent heat resistance, and good steam processing resistance. Combinations of these alkyd polyester types with certain vinyls also result in litho coatings of considerable interest. While these types of coatings are at present somewhat more expensive than the older types, it is expected that their unique properties will result in increased

(*Continued on Page* 115)

Beer Cans at All-Time High

The beer can, which celebrated its 20th anniversary Jan. 24, hit an all-time production high of nearly 6.5 billion units in 1954, according to William C. Stolk, president, American Can Co.

"This record," Mr. Stolk said, "dramatizes the tremendous growth in popularity of canned beer during its 20 years of existence. Since American Can introduced the first beer can, trademarked 'Keglined,' the entire industry has produced 42 billion cans for beer and ale."

He pointed out that the 200-million-unit increase in beer cans last year over 1953 was attained despite a drop in the over-all packaged beer market. "Packaged beer represents 77 percent of all beer sold," Stolk said, "and canned beer makes up 33 percent of this total."

The Canco executive stated that the U. S. public favors "convenience" packaging which has promoted a rise in the annual use of metal cans from 130 in 1903 to almost 800 per family today.

Mr. Stolk said that, in spite of the volume growth for the industry, there has been some concern expressed over a decrease in the per capita consumption of beer.

"In my opinion, there is no cause for concern," he declared. "The answer lies in the changing pattern of age groups in the U. S. population."

•

Discuss Canned Soft Drinks

Increased production of canned soft drinks was predicted by E. K. Walsh, assistant general manager of sales for American Can Company, at the recent 36th annual convention of the American Bottlers of Carbonated Beverages.

Mr. Walsh pointed to the history of beer canning and predicted that the canning and consumption of soft drinks would show similar growth. He said, "We are very optimistic that canned soft drinks will eventually chalk up a record comparable to that for other types of metal containers and also help increase the over-all sales of carbonated beverages."

Technical SECTION

Results of a Study on

Offset Collotype

Harry H. Lerner
Triton Press, Inc.

ABSTRACT: Continuous-tone printing as exemplified by the Collotype process is briefly explained together with a short history of its background both in this country and in Europe. Developments are brought up to date with the introduction in America of the Direct Rotary Press about 1930 and early attempts to print the Collotype plate by offset.

Although the principles of Collotype have been applied to the Offset press, a new type of plate has been derived specifically for the purpose. The disadvantages of Collotype have been largely circumvented as a result. Long runs of high quality are now possible on grainless plates and without a water fountain on the press. The new plate was designed for the Army for the printing of aerial photos directly from the original aerial negatives without the intermediate steps of screening as in conventional offset. The continuous-tone image of the new plate shows excellent resolution of detail and tonal graduation on a par with Collotype.

THE process commonly called Photo-Gelatin—or as we prefer to call it—Collotype, has been in the hands of craftsmen for some 50 years. The printed literature on the subject is exceedingly sparse and whatever is available does not disclose many important techniques used in the process. It is therefore not surprising that so little is known about Collotype and so few people in the graphic arts have taken an interest in this unique method of printing. As you know, it is the only photomechanical method which is capable of printing a continuous-tone, screenless image. Another distinguishing feature of Collotype is the exceptional tonal quality which it is capable of yielding. And its chief disadvantage is of course, its short run of very uncertain duration.

Before we go into any of the ramifications of Collotype printing, it might be best to review very briefly the basic aspects of the method so that it will be clarified for those who are meeting up with it for the first time.

Just about 100 years ago a Frenchman by the name of Poitvin discovered the basic principle of Collotype, namely, that a bichromated colloid such as Gelatin was light-sensitive and could cause a reaction to take place which tanned the colloid in direct ratio to exposure. This is not only the basis for Collotype—it is also the basis for almost every photomechanical printing method practiced today. But the unique property of the bichromated colloid has been largely overlooked in all the screen methods such as photo-engraving and lithography. Only in gravure and collotype do we take advantage of the unusual straight line reproduction curve which a bichromated colloid is capable of yielding.

How It Works

Briefly, the mechanism of Collotype is the following: gelatin is sensitized with bichromate and the resulting solution is coated on a support. The plate thus formed is exposed under a continuous-tone negative and an image is created in accordance with the light modulated by the negative densities. When the plate is placed in water and the bichromate sensitizer is washed out we are left with an image in the gelatin layer that is composed of relatively hard and soft gelatin.

The shadow areas are, of course, highly tanned while the middle tones and highlights are relatively less tanned and if we swell the gelatin

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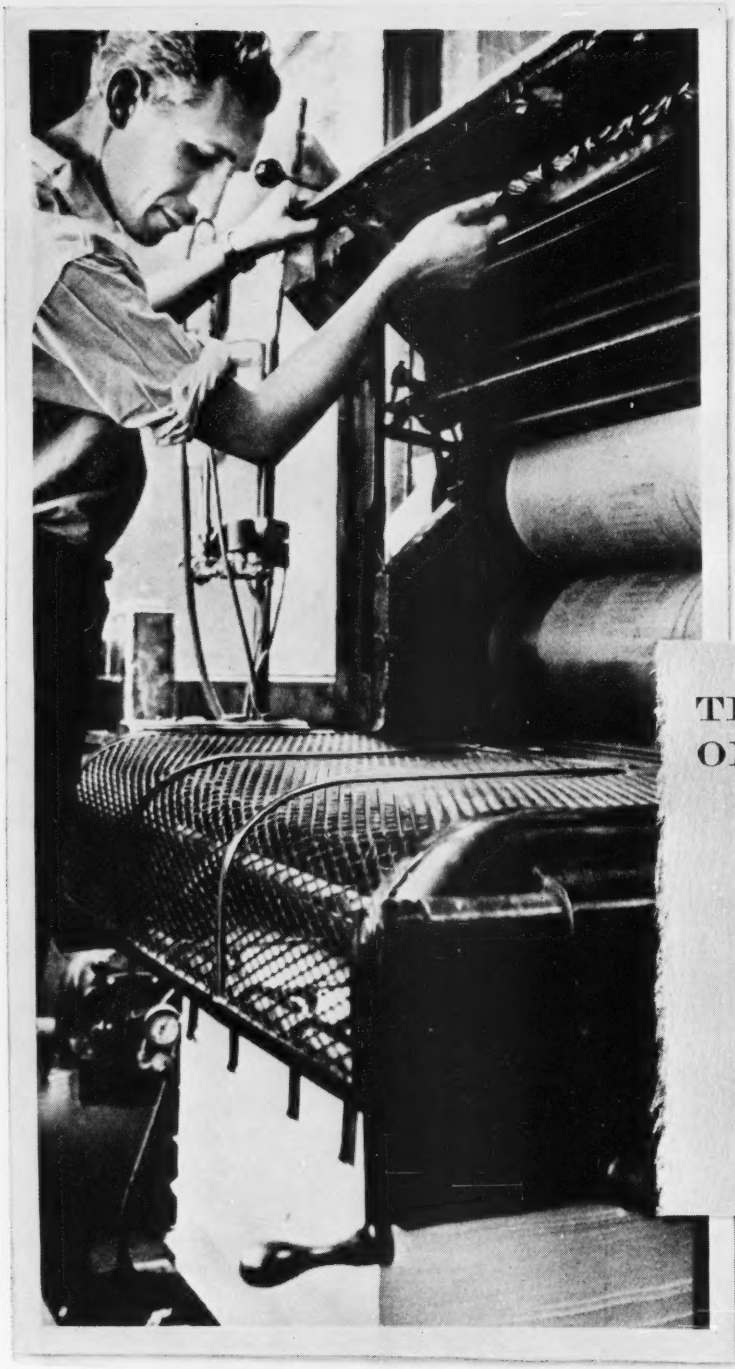

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layer in a glycerine and water bath it is quite obvious what will happen. The image will take up gylcerine and water in exact proportion to the amount of tanning produced by the light which passed through the negative on exposure. As we ink up this image on the press, those areas which are very hard such as the shadows will accept ink readily, while the less tanned areas will accept less ink and the highlights will actually repel most of the ink. All that is left is to transfer the inked image to a sheet of paper. Normally, this is done by direct rotary lithographic presses which are now considered the relics of the printing industry. In Europe, flat-bed presses still are used and instead of coating a sheet of aluminum for the plate as we do they coat a heavy piece of plate glass. The process, however, is essentially the same. The paper comes in direct contact with the plate and pulls the ink out.

From these few remarks you can readily see that the Collotype process is exceedingly simple and straightforward. The process when it was introduced into the U. S. more than 50 years ago was surprisingly successful almost immediately. And yet, practically no technological advances were made in Collotype in all these years with possibly one exception. Around 1930, the direct rotary press was introduced for a Collotype plate and this was a great improvement over the European flat-beds. A press run of 500 impressions per day for a flat-bed press was considered average, while the direct rotary under ideal conditions could produce 10 times that amount or around 5000 impressions which is just about the limit for the gelatin plate.

Needed Longer Runs

By the late 1930's, the need for longer runs was dictated by developments within the business structure of our economy. Highly organized national distribution set-ups required wide-spread advertising coverage and this in turn gave rise to commercial printing which could adequately fulfill those needs. The Collotype printers, flushed with the success of the direct rotary press, took the next logical step and put the Collotype plate on an offset press. But the high hopes soon vanished and by 1940 or thereabouts the offset presses had proved to be failures and were discarded.

You'll notice I said the offset press was the failure—for the Collotype printers never blamed their plate which had always given them such excellent results and it was natural for them to find fault with the offset principle rather than with their chief stock in trade.

This just about brings us up to date with the beginnings of our story. Some two years ago, Messrs. Robert E. Rossell and Stephen W. Gibson of the Engineer Research and Development Laboratories at Fort Belvoir began to study continuous-tone printing for purposes of reproducing the fine detail of aerial photos. Visits were made to all the Collotype plants and very little information was forthcoming which could conceivably be encouraging.

This paper was presented at the sixth annual technical meeting of the Technical Association of the Graphic Arts, May 10-12, 1954.

My own interview with these gentlemen was not much better. Their requirement of a minimum 10,000 run from a plate sounded like a fine dream. It was our experience that runs over 5000 impressions were exceedingly rare and to double that figure as a minimum requirement was indeed very ambitious to say the least. Plates wear out principally because of the abrasive action of the paper in contact with the plate surface. And since the gelatin emulsion is of a necessity composed of hard and soft areas comprising the image and non-image portions, we can not change that relationship to any great degree.

Consequently, the soft areas representing the highlights of the image as well as the non-image eventually break down. In the offset press this situation is not as drastic since only the rubber blanket touches the plate. However, considerable pressure must exist between blanket and plate to pull out a heavy deposit of ink from the shadows. The highlights being swollen with moisture will take the brunt of the impact from the blanket and will finally break down, although not as rapidly as from direct contact with the paper.

Improving Coating

Therefore, the emphasis for this study was directed toward improving the plate coating which is exactly what the earlier experimenters with offset Collotype failed to do.

Experience gained during World War II showed that the need existed for large quantities of aerial photographs to supplement, and in some cases to bring up to date, existing topographic maps. For the reproduction of continuous-tone subjects such as aerial photographs the topograhpic units of the Army were equipped, during the early part of the war, with 133 line glass halftone screens. The 300 line magenta contact screen was developed during the war in conjunction with the Corps of Engineers and screens were issued to the topographic units as soon as available. A 70 lb. weight coated stock was also issued, in addition to the high wet strength map stock, to be used for halftone reproductions.

It can be seen from the foregoing that every attempt was made, under the pressure of war, to provide for the best possible reproduction of aerial photographs and photomaps. However, the never ending search for "something better" led to the investigation of Collotype. The ability to provide the troops in the field with up-to-date, high quality reproductions is extremely valuable, for, no matter how intensive the training in map reading, a photograph or reasonable facsimile is always preferred over a topographic map. In some areas, too, up-to-date maps do not exist and reproductions from aerial photographs all that is available.

Broad Program

It was also decided to make the program as broad as possible in the hope of striking a lead that we could logically pursue. The objective of the contract that was finally awarded to Triton Press, Inc., by the Engineer Research and Development Laboratories, Corps of Engineers, U. S.

Army, Fort Belvoir, Virginia, was, however, very clearly defined: namely, to find a practical method to print at least 10,000 copies of aerial photos in screenless, continuous-tone. The catch, of course, is in the word "practical"—and what could be more practical than to make it a pre-sensitized plate. So, the list of requirements began to multiply and the program became broader and broader. Here is a partial list of the subjects which we had to investigate: 1. pre-sensitized plates; 2. pre-coated, unsensitized plates; 3. gelatin substitutes; 4. sensitizers; 5. inks; 6. tanning agents; 7. Humectants; 8. non-metallic supports; 9. effects of humidity and temperature, and so forth.

But, as time began to run out on us we had to concentrate in the area of our maximum experience and skill which is why we finally settled for a bichromated colloid that is essentially gelatin. Perhaps it is a happy coincidence that gelatin was chosen. The chemistry and gel-forming ability of gelatin has been extensively investigated in the last 20 or 30 years and so more is known about this protein than about any other. Due to this knowledge the commercial standardization of gelatin is further advanced than that of any other commercial protein.

The high average molecular weight of gelatin—about 100,000—is partly responsible for the high mechanical strength of gelatin films. The outstanding ability of gelatin to form reversible gels, to hold water and plasticizers in the gel lattice, to cross link with a number of chemical cross-linking agents are all essential requirements for the Collotype plate. Other natural proteins such as albumen, casein, zein have been tried

(*Continued on Page* 107)

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Correction

In the article by the Lithographic Technical Foundation in the January ML, page 51, on post-treatment for zinc, the amount of water in the post-nital solution formula was incorrectly printed. Instead of 37.85 cc. of water, 3785 cc. should be used.

Technical BRIEFS

Abstracts of Current Literature in the Graphic Arts

These abstracts of important current articles, patents, and books are compiled as a service of the Lithographic Technical Foundation, Inc. They represent statements made by the authors and do not express the opinions of the abstractors or of the LTF.

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Photography, Tone and Color Correction

PHOTOGRAPHIC AND PHOTOMECHANICAL ASPECTS OF ELECTRONIC COLOR CORRECTION. J. S. Rydz and V. L. Marquart. *TAGA Proceedings,* Sixth Annual Technical Meeting, 1954, pages 139-150 (12 pages). A review of the RCA Electronic Color Correction process is presented with emphasis on its photographic and photomechanical aspects. In order that full advantage of the method may be realized, photographic separations must meet certain specifications, and the corrected recordings must be processed by a procedure standardized by the user. Photographic separation requirements are discussed and data illustrating the techniques used to obtain the separations are presented. Flexibility in processing electronically scanned plates is obtained through the introduction of an experimentally derived tone compensating curve in the recording of the output information. Thus an overall linear tone reproduction will result if the scanned recordings are processed by the procedure used in deriving the distortion curve. Data illustrating this procedure will be presented. The Proceedings may be obtained for five dollars each from the Secretary, George S. Hammer, Forbes Lithograph Mfg. Co., P. O. Box 513, Boston, Massachusetts.

MEASURE OF DOT AREA AND SHARPNESS. D. J. Howe and J. A. C. Yule. *TAGA Proceedings,* Sixth Annual Technical Meeting, 1954, pages 111-121 (11 pages). A measurement of percent dot area of halftone negative is important in the study of tone reproduction in the printing process. Previous methods have been laborious or inaccurate. The measured area of a dot depends upon what part of the dot is selected as the dot boundary. When printing plate is made from a halftone negative, the dot boundary is a fixed density such that all parts of the dot above this density do not print and all parts of the dot below this density do print. This density is equal to that of the first step of the sensitivity guide which prints on the press sheet. An instrument has been constructed which scans many dots and measures the average percent dot area at a given density. Measurement of dot area at several densities may be used as an indication of dot sharpness. The area of a dot examined visually may be different from its printing density. A boundary definition corresponding to the visual boundary of a dot may be established and "visual dot" area measured directly. TAGA Proceedings may be purchased for five dollars from the Secretary, Geo. Hammer, Forbes Litho Mfg., P. O. Box 513, Boston, Mass.

COLOR FOR SHORT RUNS. A PRACTICAL APPROACH. R. D. Schulz. *National Lithographer* 61, No. 11, November, 1954, pages 28-29 (2 pages). Color reproduction from 35mm. Kodachrome transparencies, using a single mask, three special inks, and gray contact screens, is described. The method is also suited to the reproduction of larger color transparencies by a contact technique. Register throughout is obtained by using the transparency support, Kodak Pan Masking Film, and Kodalith Pan Film which is used for the half tone color separation negatives. The plate, if for a small Multilith or Davidson press, may also be prepunched to provide accuracy in register during platemaking and press operation. Pre-sensitized plates are used.

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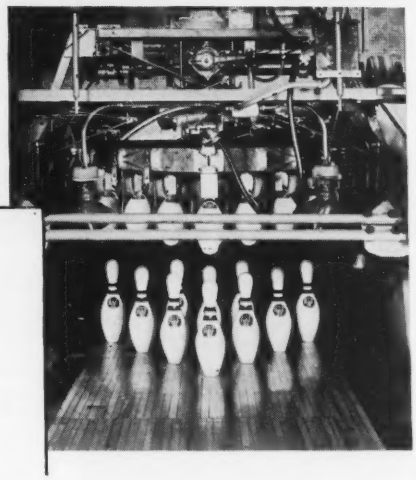

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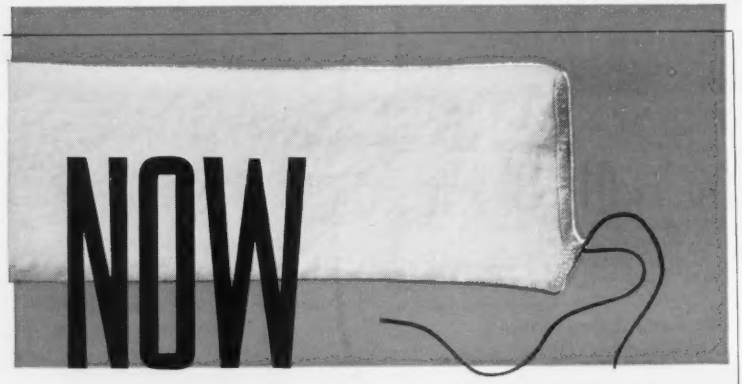
HIGHLIGHT MASKING. F. C. Kahoun. *National Lithographer* 61, No. 11, November, 1954, pages 40-41. The need for highlight masking in color separation work is discussed. The use of high contrast film with DK-60a developer is recommended. However, the masks should not be made too heavy. A density of 0.3 is suggested as being the most suitable.

A NEW COLOR SCANNER. Frank Preucil. *National Lithographer* 61, No. 9, September, 1954, pages 30-31 (2 pages); *Graphic Arts Monthly* 26, No. 9, September, 1954, pages 74, 76, 78, 80, 122 and 124 (6 pages). The author describes the Acme Color Separator which produces corrected *positives* direct from positive color transparencies. The apparatus is manufactured by Acme Teletronix (Cleveland, Ohio), a subsidiary of Scripps Howard. Color transparencies up to 8" x 10" are wrapped round cylinder and 4 color corrected images are exposed with only one scanning. 250 lines per inch are scanned at rate of 4 minutes per inch or about ½ hour for 8" x 10". Either 250 or 500 lines per inch are possible and the scanner is not limited to same size production.

*COLOR CORRECTING IN PHOTOMECHANICAL PROCESSES. *U. S. Patent* 2,692,825. F. A. Sportelli. *Official Gazette* 687, No. 4, October 26, 1954, pages 853-854. A set of positive transparencies for use in photomechanical preparation of printing surfaces comprising a pair of registering color separation positives for each of a plurality of colors to be reproduced, each pair of positives comprising a normal positive and a relatively thin and flat compensating positive, the color compensating positive having areas blocked out which correspond to areas of the normal positive in which the density correctly represents the color to be reproduced.



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Planographic Printing Processes

*PROCESS OF DEVELOPING PHOTOLITHOGRAPHIC PRINTING PLATES. *U. S. Patent* 2,692,827. F. E. Brinnick, *Official Gazette* 687, No. 4, October 26, 1954, pages 854. 1. Process which comprises exposing to actinic radiation a paper base having a surface sensitized with a coating of a photosensitive composition comprising a member of the group consisting of diazo compounds of the general formula R—Y—Ar—N_2—X wherein R stands for a member of the group consisting of alkyl, aralkyl, aryl and aroyl, Y stands for a member of the group consisting of O, S, NH, N-alkyl, N-aralkyl and N-aryl, Ar stands for aryl and X stands for an equivalent of an anion of an acid, the amino derivatives of said diazo compounds, the sulfonates of said diazo compounds, the reaction products of said diazo compounds and carbonyl compounds; and the sulfonates of said reaction products of said diazo compounds and carbonyl compounds; treating the exposed surface with a non-penetrating substance from the group consisting of powdered water-insoluble metal soaps, powdered water-repellent dyestuffs, oleic acid, vegetable oils, liquid silicones of viscosity as high as that of oleic acid, and turpentine polymerized to a high viscosity; washing the surface with water; and printing copies from the treated surface by the offset printing process.

*LITHOGRAPHIC PLATES. *U. S. Patent* 2,692,826. W. Neugebauer, A. Rebenstock and T. Scherer. *Official Gazette* 687, No. 4, October 26, 1954, page 854. The process for the preparation of lithographic plates comprising the steps of coating a flexible metallic base with a solution containing polyvinylpyrrolidone and 4,4'-diazidostilbene-2,2-disulfonic acid sodium salt to form a light sensitive colloid layer which can be tanned by light, exposing said light sensitive colloid layer to a light image, removing from the base material those portions of the colloid layer not struck by light and heating the plate to a temperature of 200° C. to 400° C. to transform said tanned images into a firmly adherent greasy ink receptive layer.

*APPARATUS FOR PLATING CHROMIUM. *U. S. Patent* 2,684,939. C. F. Geese. *Printing Equipment Engineer* 85, No. 1, October, 1954, page 63. This is useful in the manufacture of lithographic printing plates wherein chromium is applied to portions of plates which are to be water receptive and ink repellent. It comprises a rigid nonconductive tip containing a hollow reservoir for plating solution and has a capillary opening connecting with reservoir for gradually releasing the solution by the

movement of the tip against a surface to be plated. An elongated anode within the tip has an end adjacent the opening. Extremity of the tip has slots intersecting and extending away from opening to vent gases formed by electrolysis.

METAL LITHOGRAPHIC PLATES PREPARED BY XEROGRAPH. O. A. Ullrich, L. E. Walkup and R. E. Rossell. *TAGA Proceedings,* Sixth Annual Technical Meeting, 1954, pages 130-138 (9 pages). At the TAGA meeting in Rochester, New York, in April, 1950, the use of xerography for preparing offset-duplicating paper plates was described. Such plates can be made in a few minutes using only a dry powder and simple procedures. This method is receiving widespread commercial acceptance. It now can be reported that, in the laboratory, metal lithographic plates can be prepared by xerography which produce results that are considerably superior to the results obtained from paper plates prepared by xerography. In fact, such plates appear good enough for use in printing military topographic maps. At present, the process is suitable only for reproducing line subjects, and additional work will be required before they can be used for halftone reproduction. In this process, an electrostatic image is created on a selenium-coated plate by exposure to a light image. This electrostatic image is 'developed" with a dry powder, and the powder image is transferred electrostatically and fixed to a grained zinc plate. The entire operation can be completed in about five minutes. Plates as large as 27 by 30 inches have been made and larger sizes should present no insurmountable difficulties. TAGA Proceedings may be purchased for five dollars each from the Secretary, George S. Hammer, Forbes Lithograph Mfg. Co., P. O. Box 513, Boston, Massachusetts.

*METHOD OF MAKING PLANOGRAPHIC PRINTING SHEETS. *U. S. Patent* 2,684,922. O. B. Pollock, C. L. Wilson and M. H. Pintell. *Printing Equipment Engineer* 85, No. 1, October, 1954, page 63. The method uses a selected light gauge metal foil such as zinc, aluminum, copper, etc., which is surfaced by means of a rapidly rotating brush having filaments of special form which have a primary hammer-displacing action and a very minor metal removing action. By such process, minute oriented depressions are formed regularly spaced across the surface of the metal. The depressions are greater in dimension in one direction. The surface of the plate is subjected to an aqueous solution of an alkali metal phosphate to effect the formation of a thin layer of metal phosphate on the plate.

Paper and Ink

PAPER MOISTURE BALANCE IN LITHOGRAPHY. G. W. Hammer and W. P. Greenwood. *TAGA Proceedings,* Sixth Annual Technical Meeting, 1954, pages 207-222 (16 pages). Some of the requirements for lithographing sheets in controlled atmospheric conditions are considered. A proposed type of chart for decisions on paper conditioning is de-

(*Continued on Page* 103)

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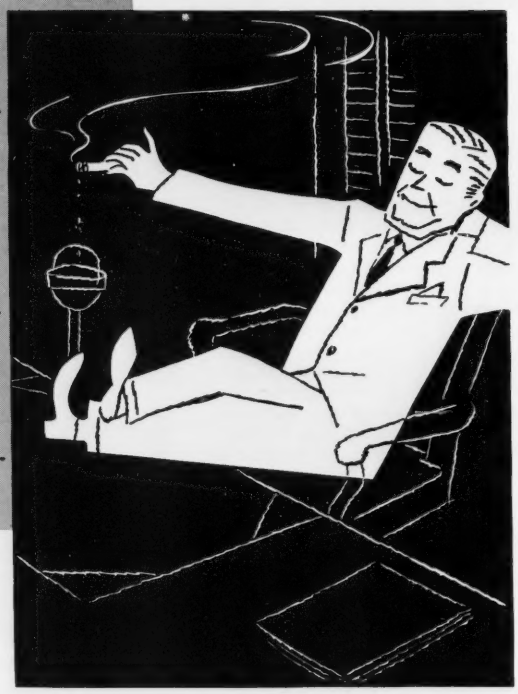

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THROUGH THE *Glass*

PROBABLY the only person disappointed about being honored during Printing Week was Thomas E. Dewey. And he wasn't really disappointed, just a little unhappy that the Franklin Award for Distinguished Service was given him for the wrong reason. Seems the New York Employing Printers Association made the award to Mr. Dewey as an "outstanding American" at the Printing Week dinner in the Biltmore Hotel.

But the association had the audacity to make the award in recognition of Mr. Dewey's record as governor of some state or other, rather than for his skill as a printer. As the former governor told the dinner gathering: "I pondered the question why you were doing me this gracious honor tonight. I finally came to the unhappy conclusion that I was not receiving this award because of my skill as a printer. Apparently the award given in the name of America's illustrious master printer comes to me for some other reason."

He went on to explain that he is the son and grandson of a printer and that printing was the first trade he learned, back in the shop of the Owosso (Mich.) *Times*, which his father published. Furthermore, the former governor claimed "I could still qualify for a union card as a pressman."

★

And speaking of Printing Week, the committee has been telling celebrants their job isn't done after Jan. 22. Pearl E. Oldt, executive secretary of the International Association of Printing House Craftsmen, wants all organizations to send him 250 copies of all locally printed material produced for PW. His address is Room 306, 307 E. Fourth St., Cincinnati 2, O. The material is needed for inclusion in the 1956 Printing Week Kit. These fellows don't relax for a minute.

Printing Week wasn't the only celebration going on during the Jan. 17-22 period, and for a few shaky moments it looked like the graphic arts ceremony might be outdone by a more picturesque affair. Someone or other declared the very same period to be "National Large Size Week," with emphasis on outsize clothing of all sorts. Looks like that obesity lobby is at work again.

★

Houston Litho Club has catered to a number of guilty consciences by moving the LTF library from the police station to the Lew Wenzel & Co. shop. There were virtually no check outs from the constabulary, the club reports.

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News
ABOUT THE TRADE

New Akron Litho Firm

Formation of Akron's newest printing and lithographing firm, Akron-Craftsman Printing Co., by the merger of three companies, was announced last month by Clayton E. Herriott, president.

The new company results from the consolidation of Akron Printing & Lithographing Co., Craftsman Press, Inc. and Craftsman Lithograph Co., all of Akron, O.

Other officers of the new company are Leonard E. Price, vice president; Mrs. Pauline Herriott, treasurer; Lee L. Ellsworth, secretary; and Roy C. Lockwood, chairman of the board.

•

Gibson Vetoes Union

Efforts of two unions to organize employes of the Gibson Art Co., Cincinnati, failed in recent elections conducted by the National Labor Relations Board. International Pressmen and Assistants Union of North America lost by a vote of 418—368 against the AFL union. In another election, lithographers voted 39 to 12 to reject union representation. Gibson is one of the country's largest printers of greeting cards.

•

San Francisco Firms Merge

Beatty Printing Co. and Mission Press, two of San Francisco's oldest independent printing shops have consolidated to form Mission - Beatty Printing Co.

The new company will specialize in commercial, color and publication printing both letterpress and offset.

Herbick & Held

Eddy Merge

Herbick & Held and Eddy Press officials met Jan. 4 to complete the merger of the two companies. Seated, l.-r., Ellen A. Coulson, secretary, H. & H.; C. F. Steen, secretary-treasurer, Eddy Press; and Thomas P. Butler, executive vice president, H. & H. Standing (l.-r), O. C. Jochumsen, vice president, H. & H.; Homer B. Kline, vice president, Eddy Press; Arthur Gratz, treasurer, H. & H.; and Leo G. Carmain, vice president, H. & H. Julius Schmidt, president of Eddy Press, will retire. Both firms are located in Pittsburgh.

Herbick & Held Printing Co., largest printer in the tri-state area, and The Eddy Press Corp., both of Pittsburgh, have merged, it was announced recently by Thomas P. Butler, H & H executive vice president.

Herbick and Held, employing 250 persons, has seven offset presses. Both firms are integrated operations, having composing rooms and handling printing work from the manuscript to the bound book.

As part of the transaction, Herbick & Held also acquired the Modern Binders, Inc., Pittsburgh.

Eddy Press has been in business for 60 years and H & H for 52. Eddy Press will continue to operate under that name, according to Mr. Butler.

In 1953, Herbick & Held received first prize in a contest sponsored by the Printing Industry of America for the best job of promotion by any printer or lithographer in the United States and Canada.

H & H, founded in 1903 with an initial capital of less than $6,000, has grown to a company doing a $3.5 million annual business. Albert C. Held, president and son of one of the founders, has headed the organization since 1928.

•

Houston Lithographer Expands

Guy Stewart, who has been doing business as Select Printing Co., Houston, with two small offset machines, has moved to new quarters in Houston and will now operate as Stewart Lithographing. A new 22″ offset press has been installed.

•

L. A. Lithographer Names Spencer

Homer H. Boelter Lithography, Los Angeles, has appointed S. S. Spencer as sales service director. Mr. Spencer was formerly with Western Family magazine, NBC, Foote, Cone & Belding and Walter McCreery, Inc.

Litho Industry Mourns Wadewitz

E. H. Wadewitz

E. H. WADEWITZ, founder and chairman of the board, Western Printing and Lithographing Co., died Jan. 15 at St. Mary's Hospital, Rochester, Minn. He was 76.

An active leader in the affairs of LNA since his company joined in 1933, Mr. Wadewitz made many contributions to the progress of the lithographic industry. During his 21-year membership in LNA, he served as president in 1939 and 1940, was elected vice president previously for two years and was a member of the board of directors for 11 years. He became an honorary director in 1945 and served in that capacity until his death.

Mr. Wadewitz had been in ill health for several months. The publishing firm that he founded is one of the largest lithographing operations in the country, with several subsidiaries including Whitman Publishing Co., Western Playing Card Co., and the Artists & Writers Guild, Inc. Printing and lithographing plants of the parent firm are operated in Racine, Wis. and Poughkeepsie, N. Y.

Born in Waubeka, Wis., he was the son of Henry Wadewitz, a mason contractor who had left his native Leipzig, Germany to build his future in the U. S. His mother, Augusta Mehlberg, had been raised on a Wisconsin farm.

Edward Henry Wadewitz attended the small country school-house at Stony Hill near Waubeka, which today stands as a shrine to Bernard J. Cigrand, known as the Father of American Flag Day.

Entering the graphic arts industry in 1905, Mr. Wadewitz started work in a basement printing shop in Racine. He became secretary-treasurer three years later when the firm was incorporated. Steady expansion followed and in a few years a lithographing plant was added as well as an electrotype foundry, photo-engraving equipment, book bindery, playing card manufacturing facilities and carton fabricating and printing equipment. Mr. Wadewitz was made president seven years after the company erected its own building in 1928.

Throughout his life, Mr. Wadewitz remained a man of great simplicity, sincerity and humility, with a philosophy of business that was almost unique in its time. He initiated programs of stockholding and profit-sharing as well as other benefit and security plans. Much of his charitable and philanthropic work was carried on in a quiet, unobtrusive way.

Friends were asked to omit flowers. An E. H. Wadewitz Memorial Fund has been established to build a boy's gymnasium for the Racine YMCA.

•

Fotosetter Jurisdiction ok'd.

Executive councils of AFL International Photoengravers' Union of North American and AFL International Typographical union agreed on union jurisdiction in the use of the Intertype Fotosetter at Milwaukee *Journal* last month.

Agreement provides that ITU shall have jurisdiction from the point of receipt of original copy, through the various steps of composition, development of the Fotosetter film or paper print, proof-reading, corrections and at last to the final make-up of copy. Making of negative and plate from the complete make-up product will be handled under the jurisdiction of photo-engravers union. Finished plate will be sent to composing room and handled as usual.

Talton Named Secretary

John Talton, formerly estimating supervisor for Cullom & Ghertner Co., business form printers, Nashville, Tenn., was elected secretary at the annual meeting of the Board of Directors, it was announced Jan. 27 by Alven S. Ghertner, president.

Mr. Talton graduated from University of Tennessee, Extension School, where he majored in Business Law.

•

Norder Advanced by Wetzel

Appointment of Harold Norder as sales manager of Wetzel Brothers, Milwaukee printers and lithographers, was announced recently by Arthur A. Wetzel, president.

Mr. Norder, who joined the firm in 1947, will supervise local sales and will also direct and coordinate activities of Wetzel's regional sales offices in Chicago, Detroit, New York and San Francisco.

•

Stuart E. Arnett

Arnett Organizes New Firm

Stuart E. Arnett, until recently with Harris-Seybold Co., has formed his own organization in Cleveland under the name, Arnett Enterprises. He will function as a sales management counselor to firms in the graphic arts industry and will also act as a distributor for printing equipment manufactured by Davidson Corp., plus other graphic arts equipment and supplies in parts of Ohio and Indiana. Mr. Arnett will also publish certain printed materials useful as management aids. His first product of this type is to be a personnel and job rating form.

Offices of Arnett Enterprises are located at 2100 Keith Building, Cleveland.

Prior to his recent connection with Harris-Seybold, where he held an executive position in the sales department, Mr. Arnett had formerly been sales manager for the Printing Machinery Division, Electric Boat Co., since taken over by Miller Printing Machinery Co.

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[BETTER PAPER Warren's STANDARD BETTER PRINTING]
Printing Papers

Dively Gives 1955 Outlook

"General business in 1955 will be good; the question is how good?"

George S. Dively, chairman and president, Harris-Seybold Co., in his forecast for the coming year continued that "although the rapid rate of improvement shown at the end of 1954 may not be maintained, I believe that 1955 will be one of the best years in history—barring serious international complications."

"Advertising, which has been growing about 10% per year, is an important factor in the creative selling required in a competitive economy. Commercial printing and lithography should continue to benefit from this growth."

"As in the past, we cannot fail to stress the continuing trend toward increased use of multicolor printing. Color television should begin to make itself felt noticeably during the year, strengthening the demand for color advertising even further. Collateral material for requirements of color TV has actually bolstered demand for the permanent, visual-communications offered by printing."

George S. Dively

Harris-Seybold is placing emphasis on shortening delivery schedules on equipment to aid printers in their growth and improvement programs.

California Lithographer Retires

Retirement of Frank E. Falk, vice president and general mgr., Rossotti California Lithograph Corp., San Francisco, Calif., was recently announced by Charles C. Rossotti, president of the California plant. Mr. Falk's plans for the future are not known.

The California company, a subsidiary of Rossotti Lithograph Corp. with executive offices in North Bergen, N. J., specializes in lithographing multi-color labels, folding cartons and carry-home containers.

•

PIA Schedules Executive Meeting

A two-day professional conference for production executives of printing and lithographing companies has been set for the Palmer House, Chicago, Feb. 3-4. Designed to give executives an opportunity to consider and discuss ideas, plans, and procedures for better profits, the program will have one general session and three seminar sessions.

Case histories of three companies will be presented by their representatives at the general session. Seminar meetings will include the following topics: What are the requirements for sales and from sales in relation to the production dep't? What types of charts or graphic records can be utilized to show sold and unsold hours by departments? What information is needed in the request for the estimate? What is required from the estimating department?

•

United Names Stoddard Pres.

Robert H. Stoddard resigned as vice president and director of sales of Gibson Art Co., Cincinnati, to become president of United Printers and Publishers, producers and distributors of greeting cards, calendars and advertising novelties, with headquarters in Chicago, it was announced last month.

Mr. Stoddard will head the five affiliated firms of P. F. Volland Co., Greetings, Inc., and Gerlach-Barklow, all of Joliet, Ill.; Rust Craft Publishers, Boston, Mass., and Autographic Corp., Chicago.

John E. Veith, formerly Gibson southeastern divisional sales manager, has been appointed vice president and director of sales. Headquarters for his eight-state division is Washington, D. C.

Protest Paper Price Increase

Lithographers National Association, National Association of Photo-Lithographers and Printing Industry of America appealed directly last month to leading paper mills across the country to hold the price line.

Telegrams jointly signed by Carl R. Schmidt, LNA president; Rex G. Howard, NAPL president; and William H. Walling, PIA president, were sent Jan. 5 to approximately 100 paper manufacturers and important paper converters, stating the industry's position and indicating industry representatives would be happy to discuss all aspects of the matter with individual paper producers. The wire to paper mills read in part:

"Despite a continuing high volume of paper consumption reflecting sustained sales volume printers and lithographers have not maintained a sound profit position and current declining trend of profits causes grave concern.

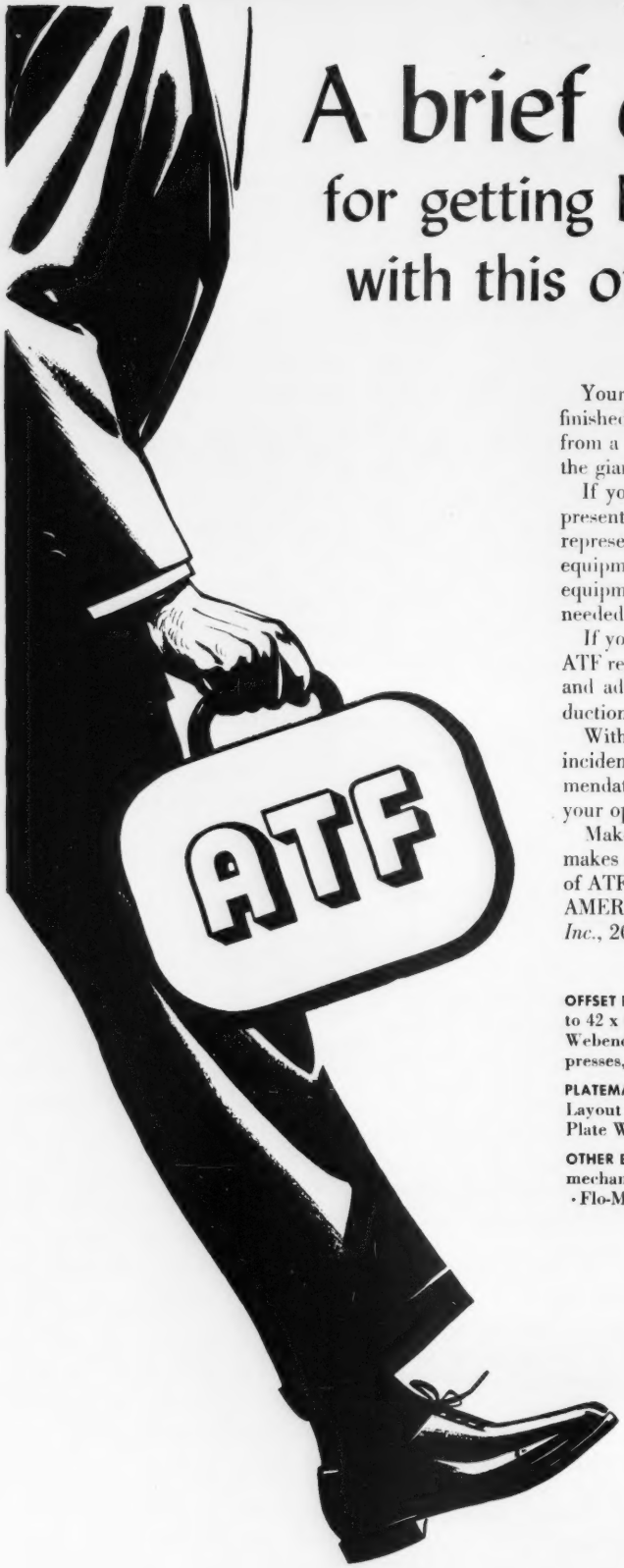
"Present costs and price levels also confront our members with serious competition from abroad. Many advertisers shifting appropriations to other media at expense of printing and printing papers. Current efforts of printing industry to price our products on a sound basis would be seriously undermined by further paper price increases."

LNA Industry Relations Bulletin of Jan. 7 said there is a strong indication that price increases already posted for sulphite paper are being treated as trial balloons and the reaction of printers and lithographers is being watched closely by the paper industry.

It was also urged that the purchasing departments of printers and lithographers strongly support the opposition to further paper price increases.

Mailograph Co., New York, announced Jan. 17, that in conjunction with New York Employing Printers Association, it is enlisting the aid of advertisers, agencies and others connected with the graphic arts and printing industries in a drive to halt price increases in the fine paper field.

New York paper merchants are inclined to feel that this effort at a



A brief case...

for getting better acquainted with this offset specialist

Your ATF representative knows offset from platemaking to finished job. It figures—his company's line of presses run from a 14 x 20 Chief, through the 14-press Mann line, up to the giant web-fed Webendorfers.

If you are planning to get into offset, or to expand your present offset production facilities from duplicators, the ATF representative is an ideal man to have in on your production equipment discussions. He can offer you simple plate-making equipment and presses, such as the Chief 20, in the size range needed to improve your productive capacity.

If you are a printer planning a further step in offset, your ATF representative can tell you about our outstanding camera and advanced plate-making equipment as well as high production Chief, Mann, and Web-fed offset presses listed below.

With this complete line of products to sell (letterpress, too, incidentally), the man from ATF can give you a sound recommendation when it comes to picking equipment that best fits your operation.

Makes a good deal of sense to call on him, doesn't it? It makes even more when you take a closer look at his line-up of ATF offset presses waiting for you on the following pages. AMERICAN TYPE FOUNDERS, *a subsidiary of Daystrom, Inc.*, 200 Elmora Avenue, Elizabeth, New Jersey.

OFFSET PRESSES—ATF Chiefs 14 x 20 to 22 x 29 · ATF Mann 22 x 34 to 42 x 65, one- and two-color. Also 38 x 53 Perfector. ATF Web-fed Webendorfer (Business Form, Publication, Webcolor, and Specialty presses, size to order).

PLATEMAKING EQUIPMENT—ATF Contact Printing Frame · Cool-top Layout Table · Film Developing Trough · Plate Developing Trough · Plate Whirler · Rubbing-up Table · Vacuum Printing Frame.

OTHER EQUIPMENT—ATF Process Camera, 24 x 24 · Douthitt Photomechanical Equipment · Hadego Photo Compositor · Kenro Camera · Flo-Mix Dry Powder (non-offset) Gun · Bindery Equipment.

4.8

ATF

BETTER, MORE PROFITABLE PRINTING FROM THE WIDEST LINE OF PROCESSES

Gravure...Letterpress...Offset

concerted action against the mills came too late, according to newspaper reports. Price increases in various fine paper grades were first announced in mid-December and have been followed by weekly announcements ever since.

Average price hikes are about $6 a ton, or three to four percent over previous levels and affect all grades except text papers.

Printers estimate the increases mean a boost of one-half to three-quarters of a cent a pound, raising costs of finished printed matter about four percent.

•

MLA Elects Officers

Metropolitan Lithographers Assn., New York City, at the annual business meeting Jan. 12, Hotel Shelbourne, elected the following to office for 1955:

Philip Smit, Lutz & Sheinkman, president; George Schlegel III, Schlegel Lithographing Corp., vice president; and Edward D. Wilson, New York Lithographing Corp., treasurer.

Directors elected for three years were: Edgar L. Halberstadt, Robert Teller Sons & Dorner; Arthur Herst, Herst Litho Inc.; George C. Kindred, Kindred MacLean & Co.; Edward D. Wilson, New York Lithographing Corp.; and William Winship, Brett Lithographing Co. Samuel Denburg, Barton Press, Newark, was elected director for a one year period.

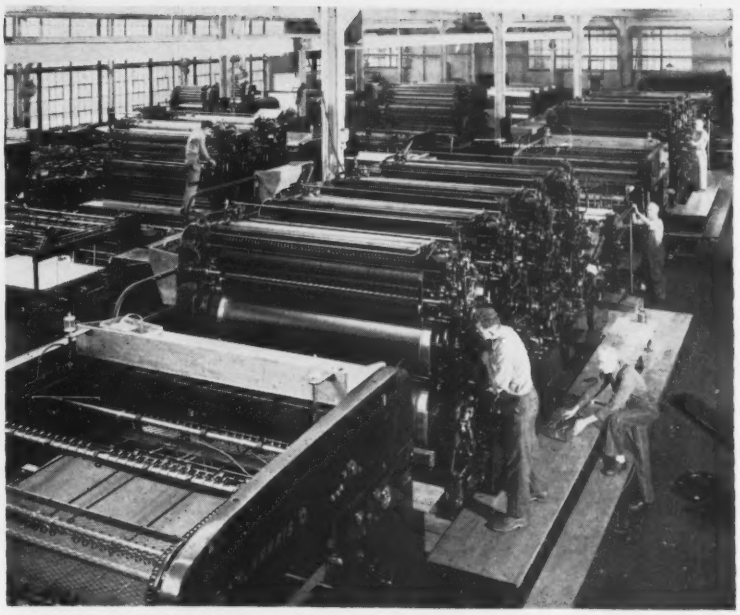
Donald Macaulay spoke at the meeting on "Quality Control", a method of measuring and maintaining uniformity of quality as determined by the first OK'd press sheet.

•

NAPL Forecasts Higher Volume

January Newsletter of NAPL indicates that lithographers may expect a higher dollar volume in 1955 but that net profit may be lower. Factors such as the 35 hour week, longer vacations, and some other fringe costs will tend to up overhead in some areas, it is pointed out.

The same letter contains a brief prepared by Walter Soderstrom, "Substantiating Travel and Entertainment Expenses May Save You Money." Mr. Soderstrom details the kinds of records necessary to keep for income tax purposes and supplies sample expense sheet forms with the article.



Presses Worth $2 Million

Trend to four-color presses is increasing, according to Harris-Seybold Co. Larger sheet sizes are becoming the rule, too. This photo shows four Harris four-color presses, all of them 52 x 76" size being constructed at the company's Cleveland plant for Photopress, Inc., Chicago; Livermore & Knight, Providence; Container Corp., Philadelphia; and Graphic Arts Process, Detroit.

•

Two N. Y. Firms Incorporate

Seacrest Litho Co., Inc., lithographers and printers, New York City, has been granted charter of incorporation listing capital stock of 200 shares, no par value. Directors are Esther L. Metrick, Harry Metrick and Max Mostum, New York City.

LaGuardia Offset, Inc., Mamaroneck, N. Y., has been granted charter of incorporation listing capital stock of 500 shares, no par value. Directors are Phyllis LaGuardia, Gerrard J. Muccigrosso and Wm. LaGuardia, Mamaroneck, N. Y.

•

Second Generation of Lunds

New Seybold P-40 and P-50 cutters were recently installed at Lund Press, Minneapolis. Mr. Lund purchased the new machinery so that his daughter, Ruth M. Leighton, and his son, William O. Lund, Jr., would have new equipment to start a second generation of printing in the Twin Cities area under the Lund name.

Council Proposing New Code

A proposed safety code for interlocking safety circuits and devices for graphic arts presses is being developed by the Research and Engineering Council of the Graphic Arts Industry, Inc.

The Sectional Committee also is determining the need for safety codes in binderies.

Service copies of the first American Standard developed primarily for graphic arts equipment were mailed out to Council members last month.

•

Florida Paper Using Coldtype

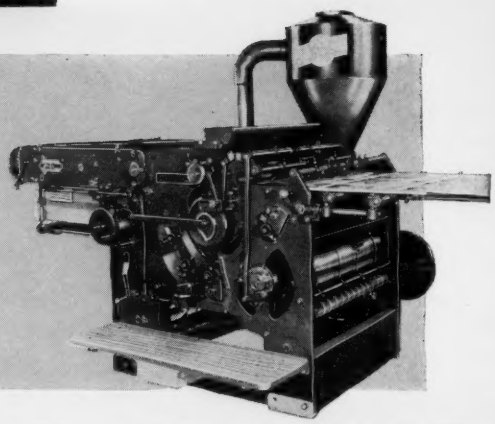
St. Petersburg *Times* prepared last month to launch full-scale production in the new "coldtype" process with installation of a second Intertype Fotosetter machine.

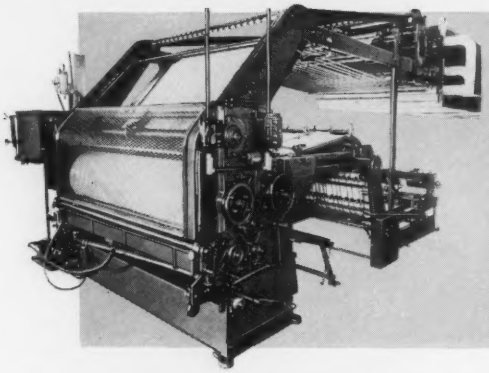
The *Times*, first newspaper to use the Fotosetter in routine daily ad production, pioneered coldtype production techniques a year ago. Last August, two Dow-ASPA Fast Etch engraving machines were added to facilitate the engraving of coldtype paste-up layouts, the company reported.

CHRISTENSEN... for Pressroom Profits

DEXTER

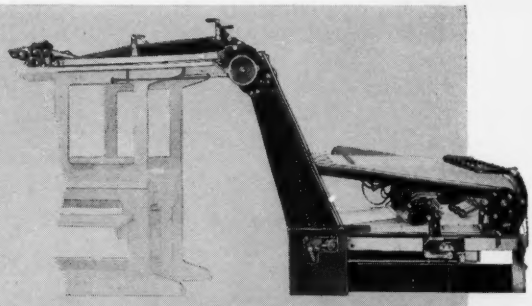
BRONZING Equipment will bring new jobs into your shop . . . and a Christensen High-Speed Bronzer attached to your press will mean increased profit with low operating costs. Matches the practical running speed of your press . . . exhauster-reclaimer keeps bronze out of the pressroom and in the machine.





VARNISHING of labels, magazine covers, circulars and gift wrappings enhances both product appearance and profits. The Christensen Varnishing Machine operates at almost twice the speed of any other present varnisher. Dual-level oven decreases floor space required. The Christensen will handle paper or board in widths up to 78 inches.

STREAM FEEDING with the Christensen Continuous Feeder means no stopping of the press . . . more printed sheets per hour. Improved register because sheets arrive at register position at one-sixth the speed of sheet-by-sheet feeders. Floor loading reduces operator fatigue, reduces loading time, eliminates stairs and platforms.



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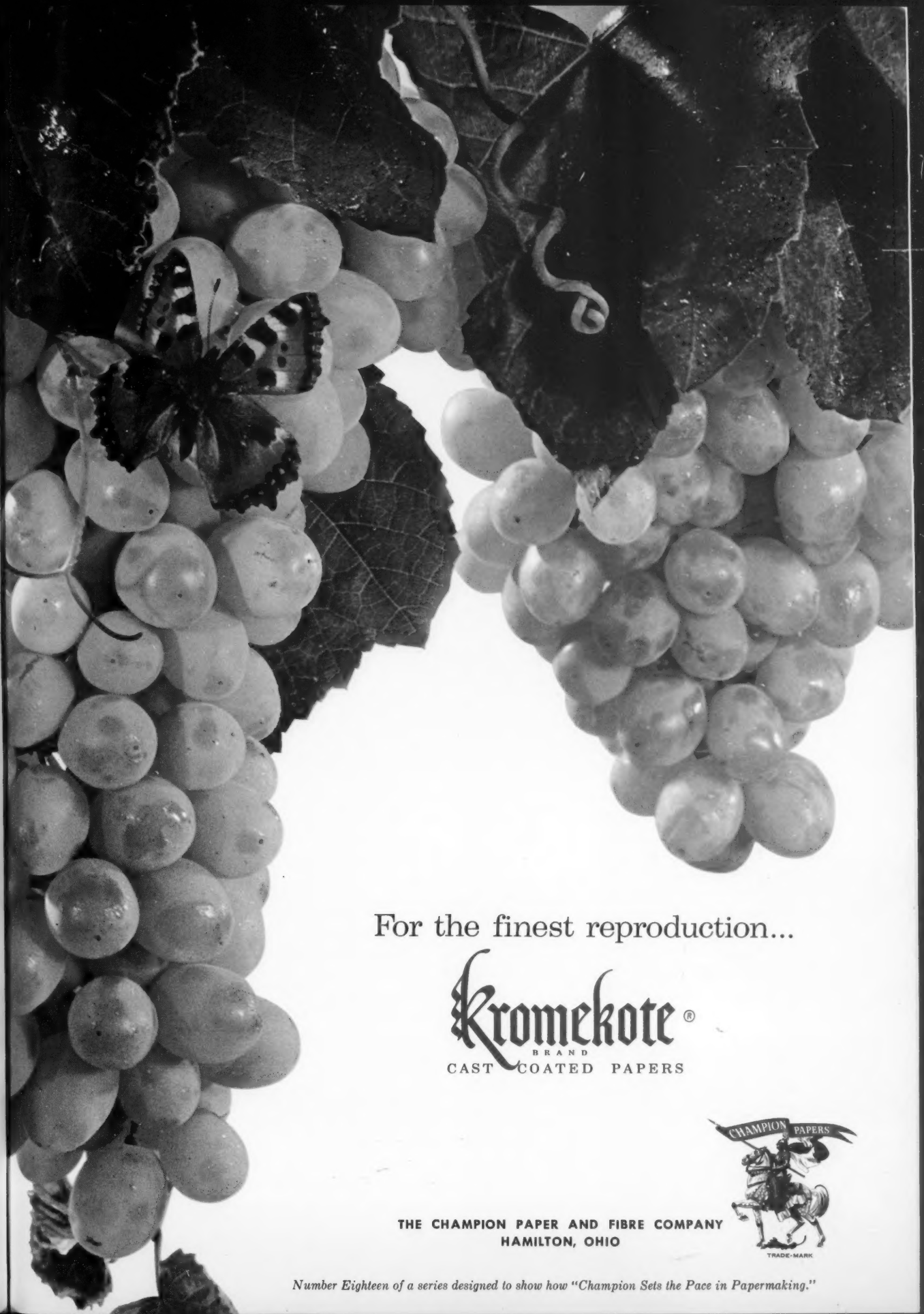
General Sales Office

330 West 42nd Street New York 36, N. Y.



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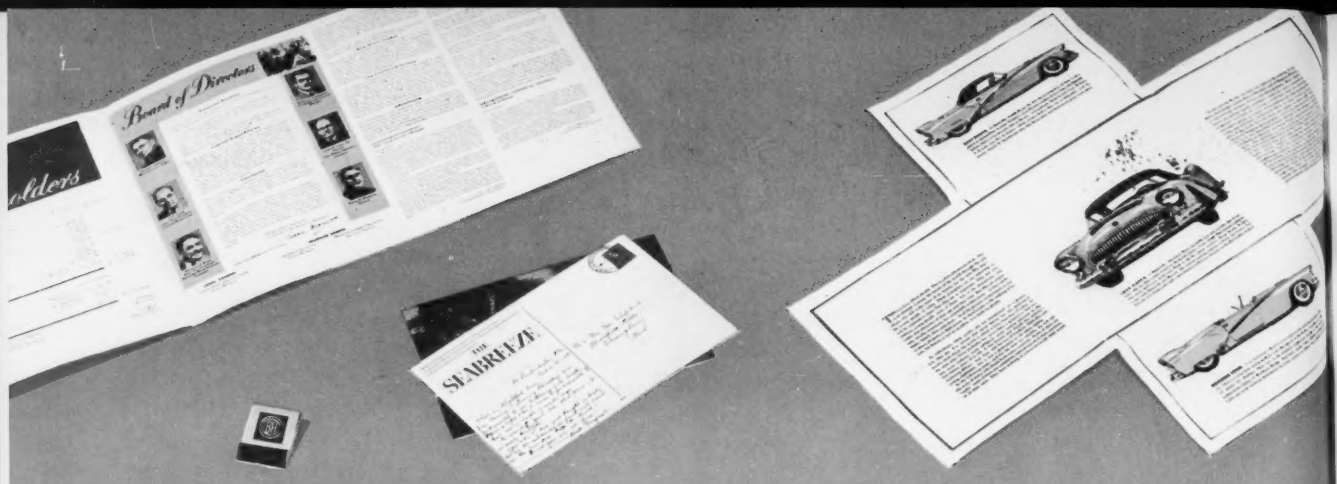
THE CHAMPION PAPER AND FIBRE COMPANY
HAMILTON, OHIO

Number Eighteen of a series designed to show how "Champion Sets the Pace in Papermaking."



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Montgomery — W. H. Atkinson

ARKANSAS
Little Rock — Roach Paper Co.

CALIFORNIA
Los Angeles — Carpenter Paper Co.
San Franciso — Carpenter Paper Co.

COLORADO
Denver — Carpenter Paper Co.

CONNECTICUT
Hartford — John Carter & Co., Inc.
New Haven — John Carter & Co., Inc.

DISTRICT OF COLUMBIA
Washington — The Whitaker Paper Co.

FLORIDA
Jacksonville — The Jacksonville Paper Co.
Miami — The Everglade Paper Co.
Orlando — The Central Paper Co.
Tallahassee — The Capital Paper Co.
Tampa — The Tampa Paper Co.

GEORGIA
Atlanta — The Whitaker Paper Co.
Macon — The Macon Paper Co.
Savannah — The Atlantic Paper Co.

IDAHO
Pocatello — Carpenter Paper Co.

ILLINOIS
Chicago — Bradner Smith & Co.
Dwight Brothers Paper Co.
Parker, Schmidt & Tucker Paper Co.
Charles W. Williams & Co.*
Decatur — Decatur Paper House, Inc.
Peoria — Peoria Paper House, Inc.
Quincy — Irwin Paper Co.
Rock Island — C. J. Duffey Paper Co.

INDIANA
Fort Wayne — The Millcraft Paper Co.
Indianapolis — Indiana Paper Co., Inc.
*

IOWA
Des Moines — Carpenter Paper Co.
Pratt Paper Co.
Sioux City — Carpenter Paper Co.

KANSAS
Topeka — Carpenter Paper Co.
Wichita — Southwest Paper Co.

KENTUCKY
Louisville — The Rowland Paper Co., Inc.

LOUISIANA
New Orleans — The D & W Paper Co., Inc.

MAINE
Augusta — John Carter & Co., Inc.

MARYLAND
Baltimore — Garrett-Buchanan Co.
The Whitaker Paper Co.

MASSACHUSETTS
Boston — John Carter & Co., Inc.
The K. E. Tozier Co.*
Springfield — John Carter & Co., Inc.
Worcester — John Carter & Co., Inc.

MICHIGAN
Detroit — The Whitaker Paper Co.
Grand Rapids — Central Michigan Paper Co.

MINNESOTA
Minneapolis — C. J. Duffey Paper Co.
Inter-City Paper Co.
St. Paul — C. J. Duffey Paper Co.
Inter-City Paper Co.

MISSISSIPPI
Jackson — Jackson Paper Co.
Meridian — Newell Paper Co.

MISSOURI
Kansas City — Carpenter Paper Co.
St. Louis — Acme Paper Co.
Shaughnessy-Kniep-Hawe Paper Co.

MONTANA
Billings — Carpenter Paper Co.
Great Falls — Carpenter Paper Co.
Missoula — Carpenter Paper Co.

NEBRASKA
Grand Island — Carpenter Paper Co.
Lincoln — Carpenter Paper Co.
Omaha — Carpenter Paper Co.

NEW HAMPSHIRE
Concord — John Carter & Co., Inc.

NEW JERSEY
Newark — Central Paper Co.
Trenton — Central Paper Co.

NEW MEXICO
Albuquerque — Carpenter Paper Co.

NEW YORK
Albany — Hudson Valley Paper Co.
Binghamton — Stephens & Co., Inc.
Buffalo — Hubbs & Howe Co.
Jamestown — The Millcraft Paper Co.
New York City — Aldine Paper Co., Inc.
Forest Paper Co., Inc.
Holyoke Coated & Printed Paper Co.*
Paper Sales Corp.
Pohlman Paper Co., Inc.
Reinhold-Gould Inc.
Royal Paper Corporation
The Whitaker Paper Co.
Charles W. Williams & Co.*
For Export — Bulkley, Dunton Paper Co., S.A.
Butler American Paper Co., Inc.
Rochester — Hubbs & Howe Co.

NORTH CAROLINA
Asheville — Henley Paper Co.
Charlotte — The Charlotte Paper Co.
Raleigh — Epes-Fitzgerald Paper Co.

OHIO
Akron — The Millcraft Paper Co.
Cincinnati — The Cincinnati Cordage & Paper Co.
The Queen City Paper Co.*
The Standard Paper Co.
The Whitaker Paper Co.
Cleveland — The Millcraft Paper Co.
Columbus — Sterling Paper Co.
Dayton — The Cincinnati Cordage & Paper Co.
Toledo — The Millcraft Paper Co.

OKLAHOMA
Oklahoma City — Carpenter Paper Co.
Tulsa — Beene Paper Co.
Tayloe Paper Co. of Oklahoma

OREGON
Portland — Carter, Rice & Co. of Oregon

PENNSYLVANIA
Allentown — Kemmerer Paper Co.
(Division of Garrett-Buchanan Co.)
Lancaster — Garrett-Buchanan Co.
Philadelphia — Garrett-Buchanan Co.
Matthias Paper Corp.*
Paper Merchants, Inc.
Whiting-Patterson Co., Inc.

PENNSYLVANIA (Cont.)
Pittsburgh — The Whitaker Paper Co.
Reading — Garrett-Buchanan Co.

RHODE ISLAND
Providence — John Carter & Co., Inc.

SOUTH CAROLINA
Columbia — Epes-Fitzgerald Paper Co.

TENNESSEE
Chattanooga — Bond-Sanders Paper
Knoxville — The Cincinnati Cordage Paper Co.
Memphis — Tayloe Paper
Nashville — Bond-Sanders Paper

TEXAS
Amarillo — Kerr Paper
Austin — Carpenter Paper
Dallas — Carpenter Paper
El Paso — Carpenter Paper
Ft. Worth — Carpenter Paper
Harlingen — Carpenter Paper
Houston — Carpenter Paper
Lubbock — Carpenter Paper
San Antonio — Carpenter Paper

UTAH
Ogden — Carpenter Paper
Salt Lake City — Carpenter Paper

VIRGINIA
Norfolk — Epes-Fitzgerald Paper
Richmond — Epes-Fitzgerald Paper

WASHINGTON
Seattle — Carter, Rice & Co. of Washington
Spokane — Spokane Paper & Stationery Co.
Yakima — Carter, Rice & Co. of Yakima

WEST VIRGINIA
Huntington — The Cincinnati Cordage Paper Co.

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Milwaukee — Dwight Brothers Paper Co.

CANADA
Toronto — Blake Paper Limited

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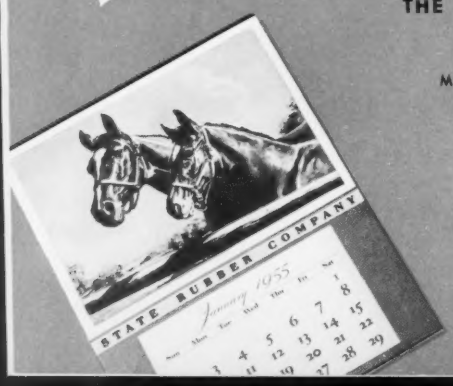
General Office: Hamilton, Ohio

Mills at Hamilton, Ohio . . . Canton, N. C. . . . Pasadena, Texas



Seated (l.-r.): C. S. Reilly, president of the two export subsidiaries and vice president-sales of the Goss Printing Press Co.; Max Glueckert, head of Fruehwald and Jaeger; Mrs. Glueckert.
Standing (l.-r.): R. C. Corlett, Goss president and chairman of the subsidiary companies; A. J. Krohn, vice president of Goss Printing Press International, S.A., and the Goss Printing Press Company Americas; and Otto Trampusch, technical consultant to the Goss Co.

Goss Marketing Offset Presses

Goss Printing Press Co., Chicago, has added web-fed offset presses to its line of rotary letterpress rotogravure and stereotype equipment, it was announced last month by C. S. Reilly, vice president of sales.

Goss Printing Press International, S. A., recently signed an agreement with Fruehwald & Jaeger of Nuremburg, Germany, to act as exclusive agent in the Western Hemisphere for that firm's rotary offset presses designed for publication and commercial printing. Heretofore Goss had limited its offset printing activity to extensive experimental work.

The Goss-F. & J. presses are built to conform to Goss designs and have standard threads and bearings. Offset presses are offered in multiple designs of varying page capacity, printing black, two colors or four colors on both sides of the web.

All Goss-F. & J. offset presses can be equipped with sheeting devices or folders. The "sheeter" delivers variable size flat sheets.

Presses can be arranged for delivery of three different folded products — tabloid, double parallel or closed-head signatures. Operating speed is 1,000 to 1,200 feet of paper a minute.

Goss Printing Press Co., Chicago, will handle sales and service of Goss-F. & J. offset presses in the United States; Goss Printing Press Co. Americas, will be the agent in Canada; and Goss Printing Press International, S. A., will handle sales in Central and South America.

Otto Trampusch, former Goss sales engineer, who had been F. & J. representative in the United States prior to the new relationship with Goss, now is acting as technical consultant to the Goss Co.

•

Fairchild Creates Subsidiary

Formation of Fairchild Graphic Equipment, Inc., wholly owned subsidiary of Fairchild Camera and Instrument Corp., has been announced by John H. Clough, president of the parent company.

Purpose of the new subsidiary is to better serve the needs of the graphic arts industry, Mr. Clough said.

John M. Case, executive vice president of the parent corporation, has been named president of Fairchild Graphic Equipment, Inc. and J. A. V. Hyatt, formerly director of commercial sales for Fairchild Camera, will be vice president. Stanley Ross, who came to Fairchild recently from Peat, Marwick, Mitchell and Co., will be treasurer and comptroller. R. H. Lasche, president, Fairchild International, S. A., will be secretary.

Young Execs Hear Walling

At a joint meeting in New York Jan. 10, of Young Printing Executives Club and Club of Printing Women, William H. Walling, Rogers-Kellogg-Stillson, Inc., told a large attendance that a bright future seemed imminent for the printing industry. Shading his optimism however, he warned that the industry must strengthen its forces in the research field as well as upping its business and technical efficiency.

Mr. Walling, president of Printing Industry of America, commended the industry on the growing unity evident among such organizations as PIA, LNA, NAPL, and LTF.

The rise in cultural activities, Mr. Walling asserted, is a boon to the future of printing. The increase in college graduates is more than 50 percent in the past 14 years.

"A better educated man" said Mr. Walling, "tends to increase his reliance on the printed presentation. We in the printing industry can look forward to a larger market."

•

Printers Gird for Tax Battle

Printing industry leaders in Illinois are anticipating renewal of a legislative attempt to impose the state two percent sales tax on printing plant products. As the legislature opened its session last month, it was thought that the state revenue department was readying a bill classifying printing as a commercial industry on which the tax could be levied. Previous efforts to impose the tax have failed.

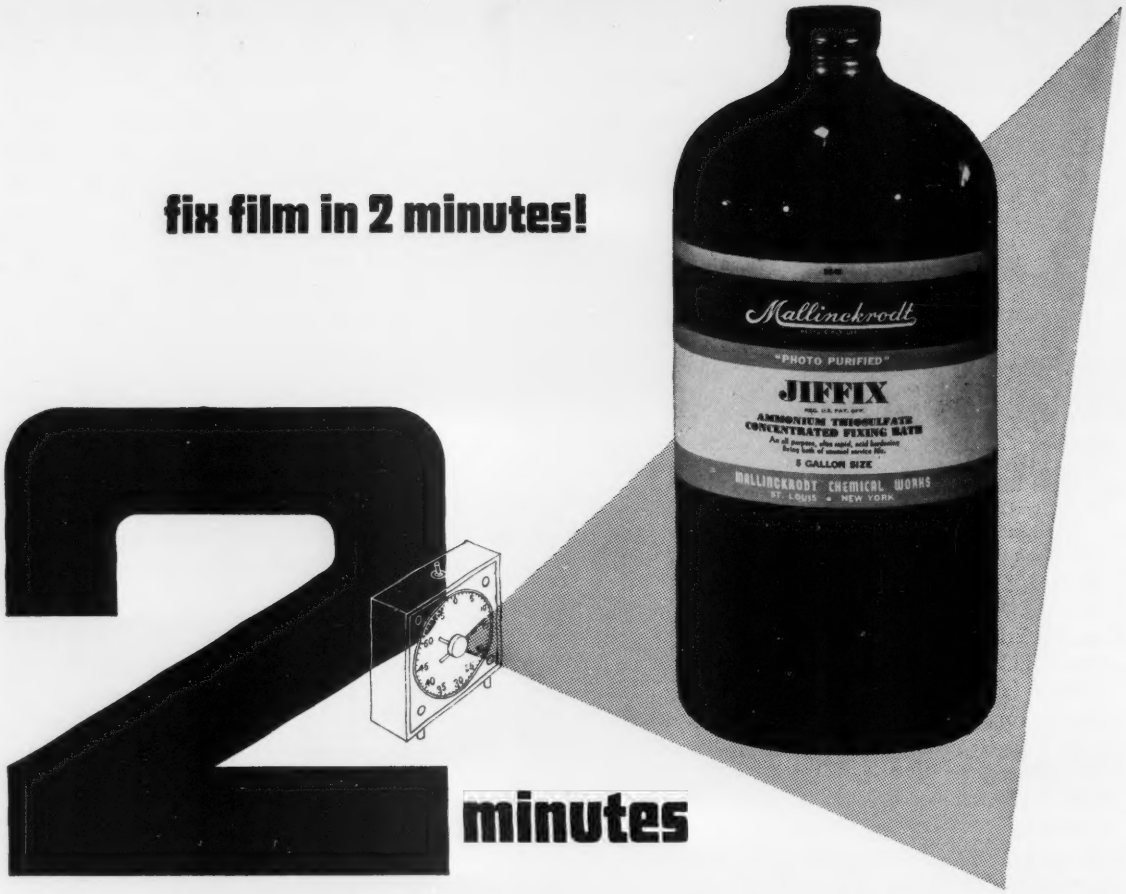
Graphic Arts Association of Illinois, with cooperation from Chicago Printing Ink Manufacturers Association and other service groups has led the opposition to such a measure. No open step had been taken by state authorities by mid-January.

•

Lithographing Firm Established

George Dean and Harold W. Anderson have formed the Des Moines Lithographing Co., 506 Third St. The firm will do commercial lithography and printing. Mr. Anderson was with the American Lithographing Co. for 25 years and Mr. Dean was a partner in the former Dean and Meek Printing Co.

fix film in 2 minutes!



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Save hours of darkroom time! A fresh solution of Jiffix will completely fix and harden your film in 2 minutes . . . up to 4 times faster than ordinary hypo baths! For proof . . . check the chart:

TYPE FILM	Approximate Fixing Time in Fresh Jiffix Solution	Approximate Fixing Time in Hypo
Process	*26 seconds*	*42 seconds*
Fine grain	*100 seconds*	*430 seconds*
Superfast Pan	*100 seconds*	*430 seconds*
Standard Pan	*120 seconds*	*480 seconds*
Orthochromatic	*120 seconds*	*480 seconds*

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Manufacturers of Medicinal, Photographic, Analytical and Industrial Fine Chemicals

St. Louis Hears Walling

Associated Printers & Lithographers of St. Louis met Jan. 12 to hear William H. Walling president, of the Printing Industry of America and chairman of the board of Rogers-Kellogg-Stillson, Inc., of New York City. His topic was "Human Relations in the Printing Industry." Following officers were elected to serve during 1955: Frank C. Corley, Corley Printing Co., president; Les Wipperman, Garrison-Wagner Printing Co., vice president; Leonard B. Brown, A. R. Fleming Printing Co., secretary; George B. Gannett, the Geo. D. Barnard Co., treasurer and Fred E. Winsor, executive vice president and general manager.

The Board of Directors includes A. H. Crow, McMullen Prtg. Co.; O. A. Dorn, Concordia Publishing House; Hube Echele, Warwick Typographers, Inc.; Oscar Hoffman, Superior Typesetting Co.; Raymond Kutterer, Kutterer-Jansen Prtg. Co.; Henry G. Keeler, Jr., Keeler-Morris Prtg. Co.; Clyde K. Murphy, Blackwell-Wielandy Co.; Donald Nies, Nies-Kaiser Prtg. Co.; F. C. Rauchenstein, Cavanagh Prtg. Co.; Herbert Sayers, Sayers Prtg. Co.; George Von Hoffmann, Von Hoffmann Press, Inc.; Harry A. Wellington, Wellington Prtg. Co.; A. L. Wunsch, Becktold Co.; John M. Wolff, Jr., Western Printing & Litho Co.; and Earl R. Britt, Sr., Britt Prtg. & Pub. Co.

•

Sales Aids Show Scheduled

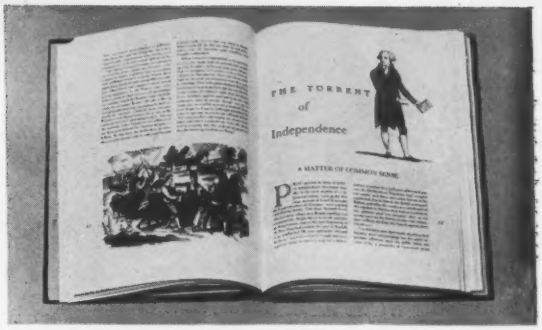
Advertising Trades Institute, Inc., will hold the second Sales Aids Show, May 23-25, in the Grand ballroom and adjacent ballrooms, Biltmore Hotel, New York.

According to Thomas B. Noble, chairman of ATI and director of the show, over 9,200 visitors attended last year's Show and plans are being made to handle a greatly increased registration this year.

ATI also sponsors the Advertising Essentials Show, which is scheduled for the Biltmore Hotel, Nov. 14-16. Request for guest tickets or for information regarding exhibition space may be made on company letterhead to Thomas B. Noble, Advertising Trades Institute, Inc., 270 Park Ave., New York, N. Y.

"Declaration" Printed Offset

"The Story of the Declaration of Independence," a 288-page book, published by Oxford University Press and set on Intertype Fotosetter has just been released. Intertype officials, declaring this to be another progressive step for photo-typesetting in the field of offset, said that production followed the conventional pattern of phototypesetting. Oxford provided layouts, text copy and illustrations, from which offset plates were made. Kellogg & Bulkeley, Hartford, Conn., was the printer, and Charles H. Bohn, N. Y., did the binding.



Chicago Ink Mfgs. Meet

Chicago Printing Ink Manufacturers Association held their annual meeting Jan. 12, and reelected Weldon R. Coate, vice president, General Printing Ink Co., midwest division, Sun Chemical Corp., to the presidency. Other officers and directors elected were:

Herbert Gaetjens, Gaetjens, Berger & Wirth Inc., vice president; Paul R. Greenman, Sleight and Hellmuth Inc., treasurer; and Directors Robert C. Dyer, Acme Printing Ink Co.; E. C. Friesendorf, A. E. Handschy Co.; Louis W. Hraback, Sleight and Hellmuth Inc.; Howard E. Olsen, Cardinal Colors Inc.; James D. Yates, Martin Driscoll & Co.; B. A. Ormsby, General Printing Ink.; L. H. Fish Jr., International Printing Ink Co. Senior Directors elected were F. H. Farnsworth, General Printing Ink Co. and Wm. S. Ruxton, International Printing Ink Co.

•

Health Center Gets Printers Gift

Highlight of the annual Printing Industries of Philadelphia Christmas party luncheon was presentation of the P.I.P. Christmas Giving Fund to Fife-Hamill Memorial Health Center for use in helping underprivileged children in the Philadelphia area. Honorable Raymond Blattenberger, Public Printer of the U. S., presented a check for more than $1,000 to Dr. Bernard M. Blum, director of Fife-Hamill. According to Joseph F. Matlack, president of P.I.P., more than 700 persons attended the annual industry get-together held in the main ballroom, Bellevue-Stratford Hotel.

•

O & N Appoints Representative

Edward K. Whitmore, president, Oberly & Newell Lithograph Corp., announced the appointment of Mrs. Betty Gardiner, formerly of Magill-Weinsheimer Co., as sales representative. The company is one of the oldest lithographing firms in the country engaged in the design and production of point-of-purchase displays.

•

ATF Closes Mt. Vernon Plant

Consolidating all engineering and manufacturing operations at its main plant in Elizabeth, N. J., American Type Founders will vacate the plant which it had been renting at Mt. Vernon, N. Y., for the manufacture of web presses.

With the decline in defense work at the Elizabeth plant, ample capacity now exists to permit ATF to integrate operations, it was stated. Company officials continued that, as a result of this move, ATF will be able to allocate more capacity to the manufacture of web-fed offset and gravure presses, which are growing in demand.

Sales and service of all ATF products will now be under the direction of R. A. Tobias, vice president. Douglas Murray will continue as sales manager of the web press division with headquarters at Elizabeth.

Take 60 Seconds and Compare

Economical ***Manifest Bond*** *with Any Other Economy Sulphite*

Take ten seconds for texture — note the smooth *printable* surface . . . the quality feel.

Take ten seconds for color — note the *brighter* blue white of Manifest Bond . . . the shade that looks *whiter*, cleaner under natural or artificial light.

Take ten seconds for strength — note that Manifest Bond is a much *stronger* sheet than most economy sulphites.

Take *thirty* seconds for performance — look over the printed Manifest Bond samples any Eastern merchant will be glad to show you. Note how the specially sized surface, dimensional stability and micromatic trimming result in square-cornered sheets that take ink evenly . . . feed smoothly . . . look like a *lot* more than they cost.

If you want to save money . . . and still do a quality job

---

use EASTERN ***Manifest Bond***

MADE BY EASTERN CORPORATION, BANGOR, MAINE

Mead Shows Letterheads

Mead Paper Co. is distributing a new "Portfolio of Sales Letters," which includes an assortment of 12 letterhead designs. The portfolio contains six suggested sales letters which are easily adaptable for use by all types of business firms. Letterheads are printed, engraved and lithographed on Mead Bond, regular wove finish, white plus six colors, as well as on the cockle and laid finishes.

•

Materials Handling Show Set

National Materials Handling Exposition scheduled for May 16-20 in Chicago, will be the most comprehensive in the eight-year history of the show, according to Clapp & Poliak, Inc., New York, founders and producers of the event.

More than 200 companies will participate and their displays will cover a 115,000-square-foot area representing a 15 percent increase over the indoor exhibit space used in 1951 when the industry last held its exposition in Chicago.

In addition, a Materials Handling Conference will be held concurrently with the exposition to permit visitors to supplement their inspection of machinery with discussions of case histories.

Theme for the show and conference is "The Concept of Obsolescence". Most of the handling devices introduced during the exposition's first year in 1947 are already outmoded, according to Clapp & Poliak.

A $100,000 advertising and promotion budget, largest ever scheduled for a single-industry exposition, has been allocated. Advance registration cards may be obtained without charge, from Clapp & Poliak, Inc., 341 Madison Ave., New York 17, N. Y.

•

Canadian Firm Advances Two

Thomas S. Duncanson, F. N. Burt Co. Inc., producers of containers in Buffalo, has been elected president of the parent company, Moore Corporation Ltd., Toronto. Mr. Duncanson has been executive vice president and a director of the parent company. He was also elected president of Moore Business Forms Inc. and F. N. Burt Co. Inc., both wholly-owned subsidiaries of the Moore Corporation, Ltd.

W. Norman McLeod, former president of the three companies, has been elected chairman of the board of the parent organization.

•

Hailparn Heads Legal Aid

Albert Hailparn, president and director, Einson-Freeman Co., Inc., will head the Graphic Arts Division of The Legal Aid Society's 1955 campaign in New York City, it has been announced by Henry S. Wingate, president International Nickel Co. of Canada, Ltd., general chairman of the appeal.

Mr. Hailparn is also vice president of Technichrome and president of the Einson-Freeman Foundation.

Myers Joins Frye

Frye Manufacturing Co., Des Moines, makers of one-time and specialty carbons for the forms printing industry, announced the appointment of Hiram A. Myers as vice president and director of sales, effective last month.

Mr. Myers had been associated with the Thermoid Co. for 19 years and was assistant to the president last year.

•

Erie Club Hears Rudisill

J. J. Rudisill, president, Printing Industry of America, and president, Rudisill and Co., Lancaster, Pa., recently addressed the annual joint meeting of the Erie Advertising and Sales Club and Erie Club of Printing House Craftsmen. He spoke on the activities of PIA.

Printing Groups Run Insurance Program

A unique kind of free "health insurance" for printers using non-offset spray materials is maintained by New York Employing Printers Association in cooperation with four organizations, N.Y.E.P.A. has announced. The groups are Graphic Arts Spray Manufacturers, International Printing Pressmen and Assistants' Union of North America, New York Printing Pressmen's Union No. 51 and New York Printing Press Assistants' Union No. 23. Graphic Arts Spray Manufacturers is a group affiliated with New York Employing Printers Association.

This "insurance" consists of conformance by the G.A.S.M. group to standards for its non-offset spray materials which assure that the materials are free of hazards to health when used in non-offset spray devices. Since 1941, when the G.A.S.M. was organized and put its standards into effect, complaints of injurious effects on workmen in plants where the group's materials are used, have progressively decreased.

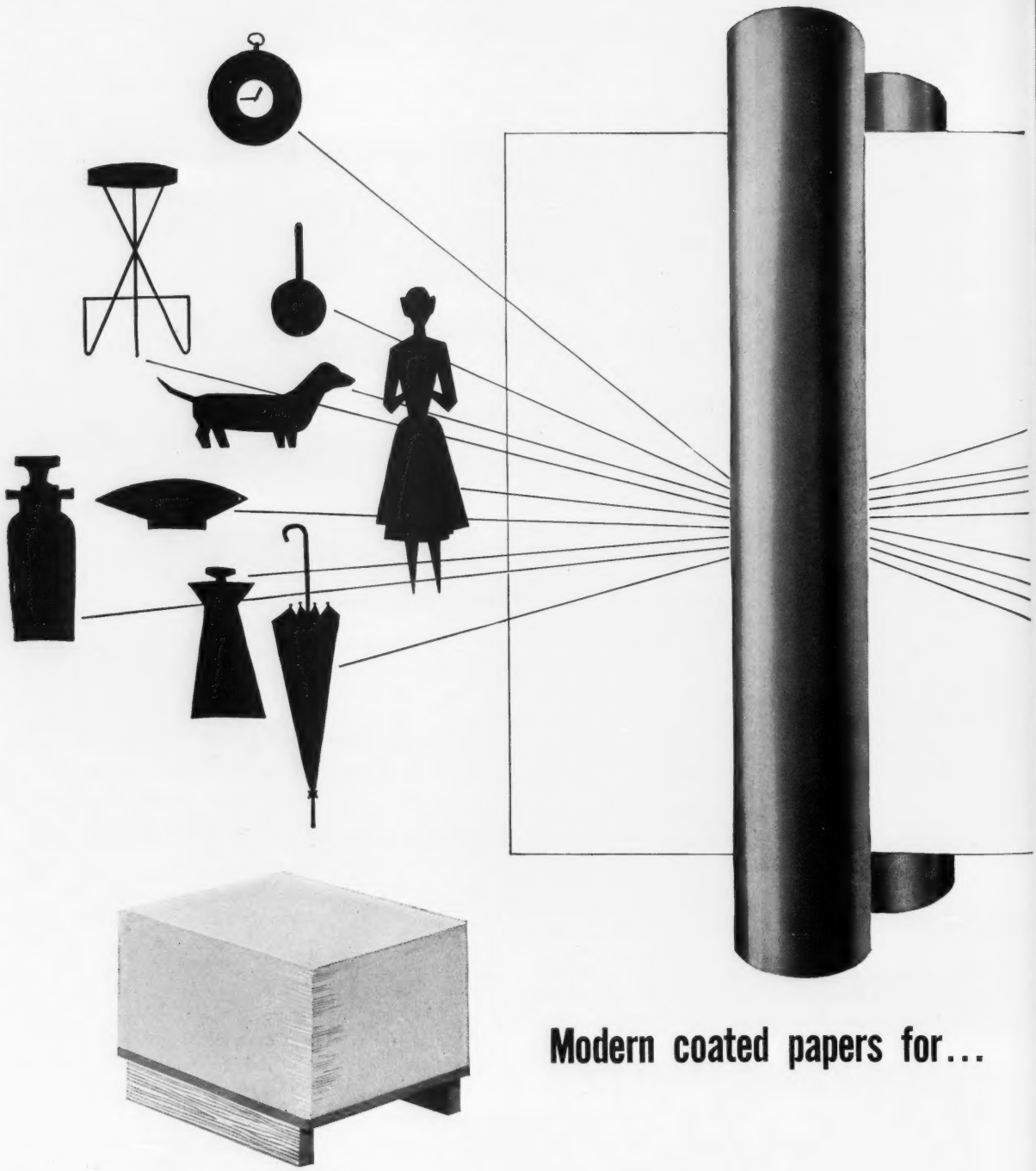
The annual analyses of these materials, manufactured by G.A.S.M. members, in December 1954 showed that the materials used are in strict conformance with health standards, requiring that all vegetables or fruit solids are to be an edible grade, other solids of U.S.P. quality and free from grit and sand; that where alcohol is used, the denaturant be of elements which, in the quantity used, will not cause a health hazard.

The regular procedure for these analyses was followed. The Association procured samples of the materials of G.A.S.M. members and they were submitted to an independent testing laboratory. The G.A.S.M. members are authorized to use the "Approved" label on their containers so long as their materials qualify.

This "Approved" label should be the printers guide in his purchase of non-offset materials if he is to benefit by this free health insurance.

The label comes in two sizes, printed in red on a yellow label paper. The wording is as follows: "John Doe Company" a member of Graphic Arts Spray Manufacturers, submitted its formula for analysis under supervision of International Printing Pressmen and Assistants' Union of North America and New York Employing Printers Association, Inc. Its product was analyzed by a reputable laboratory and in the opinion of competent medical authorities, the ingredients found to be contained therein are considered as not harmful to health when used in non-offset spray devices.

Everything comes to *life* on



Modern coated papers for...

Kimberly-Clark Hifect Enamel

How modern can a fine paper be? Try Hifect Enamel and see! It's Kimberly-Clark's finest letterpress paper, *engineered* to make the most of the newest inks and techniques . . . *designed* to give you the sharpest, most lifelike reproductions your presses can deliver!

Hifect is smooth—white—and excels in uniformity. Ream after ream has the same balance of dimensional stability, strength, opacity and other features necessary for top performance on the press and in the bindery.

Try Hifect Enamel, and talk to your Kimberly-Clark distributor about the other outstanding papers listed below. You'll find you do your best on Kimberly-Clark stock!

Modern Lithography: Prentice Offset Enamel, Lithofect Offset Enamel, Shorewood Coated Offset, Fontana Dull Coated Offset.

Modern Letterpress: Hifect Enamel, Crandon Enamel, Trufect Coated Book, Multifect Coated Book.

Kimberly-Clark

COATED PRINTING PAPERS

Kimberly-Clark Corporation • Neenah, Wisconsin

Ammonia in Cans

Packaging history was made last month when household ammonia was marketed in metal cans, reports American Can Co.

Sunlight Chemical Corp., Phillipsdale, R. I., has ordered a volume of Canco's tinless, non-dip "metal bottles" for distribution of its 'Sun-light brand super ammonia" in the East.

The 22-ounce tinless can with screw-top plastic cap and aluminum nozzle is similar to the non-drip can developed by Canco for liquid detergents now being used for Lux and White King. Sunlight Co.'s container has around-the-can lithography and a cemented side seam.

Robert Hollister, commodity sales manager, Canco's Atlantic division, said, "This non-drip can is specifically designed for such liquid products as molasses, syrups, salad dressings, cooking oils, liquid waxes, turpentine, etc.

Another new development is at Gee Gee Popcorn Co., Murray, Ky., which is now using metal cans, formerly packaging unpopped product in glass containers.

Round containers with fully lithographed labels are used.

•

Todd Co. Expands Sales

Creation of three new sales offices, one new sales division, and promotion of 11 field and home office sales personnel was announced recently by Todd Company, Inc., Rochester, N. Y.

New sales offices have been opened in Houston, Baltimore, and Greensboro, N. C., the latter two representing a split of the former Washington office.

Newly-created division comprises Rochester, N. Y., Baltimore, and Greensboro.

H. G. Jackson, was named director of sales planning for the company. He has been with Todd for 17 years.

•

Safety Men Tour Republic

Top safety experts in the graphic arts field met in Youngstown last month to observe safety practices in Republic Steel Corp.'s printing and stationery department.

Members of the executive committee, National Safety Council's Printing and Publishing Section, saw Republic's printing department, which has compiled an outstanding record of more than 11,000 days, about 4 million manhours, without a lost-time accident.

Executive committee has supervised production of a comprehensive new safety manual for the printing industry which will be used throughout the country in conjunction with a 16-week safety course.

Committee members attending the Youngstown meeting included:

Peter J. Bernard, H. Wolff Book Manufacturing Co., New York; Miss Lillian Stemp, Industrial Consultant, Whiting, Ind.; William S. Block, Meredith Publishing Co., Des Moines; Paul O'Neil, Rand McNally Co., Hammond, Ind.; Kenneth Y. Umberger, Kingsport Press, Kingsport, Tenn.; Walter R. Smith, R. R. Donnelley & Sons Co., Chicago; Eugene P. Ernest, U. S. Government Printing Office, Washington, D. C.

Ernest Sheets, R. R. Donnelley Co., Crawfordsville, Ind.; Bernard J. Taymans, Printing Industries of America, Washington, D. C.; Charles Shapiro, Lithographic Technical Foundation, New York; F. Neidhart, Miehle Printing Press Co., Chicago; Dan H. Grothaus, McCall Corporation, Dayton; James D. Saul, National Safety Council, Chicago.

•

Kodak Executive Appointments

Theodore F. Pevear, general sales manager, Eastman Kodak Co., recently announced the appointment of five executives to head two newly created sales divisions.

John McMaster was named manager and Edward H. Cann and Silvanus G. Hall, assistant managers, of the graphic reproduction sales division.

Paul A. Barbee was appointed manager and Charles F. Bullard, assistant manager, of the business photo methods sales division.

New graphic reproduction sales division combines Kodak's present industrial sales division and graphic arts sales division, Mr. Pevear said.

Michael Lith Has New Cutter

A paper cutter, handling trim jobs up to 14", has been added to the Michael Lith, Inc., line of graphic arts supplies and equipment.

According to Michael Golde, president, the ever-increasing demand for a low cost paper cutter with precision cutting to sell below $200.00 prompted the company to produce this model. Mr. Golde plans to appoint authorized dealers in U. S., Canada and South America.

•

Goss Buys Pullman Plant

Goss Printing Co., Chicago, purchased the Rockford, Ill., plant of Pullman-Standard Car Manufacturing Co., Jan. 20, it was announced by R. C. Corlett, president of Goss Printing.

Steadily increasing demands for Goss presses, reels-tensions-pasters and stereotype equipment have necessitated expansion of the Company's production facilities, it was stated.

Acquisition of the Rockford works, fully equipped with machine tools, adds 75,000 square feet to Goss' manufacturing capacity.

The plant occupies four acres and includes a one-story manufacturing building 503 by 130 feet with a two-story office section.

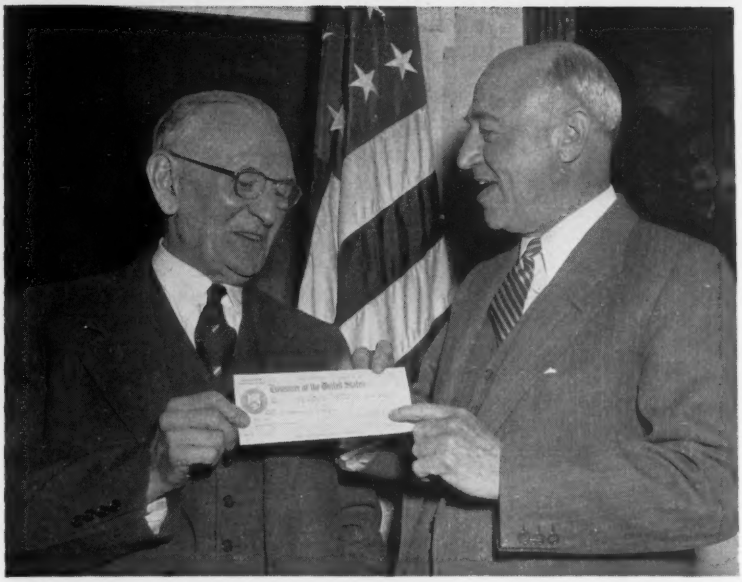
•

Legge Retires at Howard

Harry A. Legge resigned as president of Howard Paper Mills, Inc., which includes the Howard Paper Co. division, Urbana, O., Maxwell Paper Co. division, Franklin, O., Aetna Paper Co. division, and Dayton Envelope Co. division, both of Dayton. He is succeeded by W. B. Zimmerman, former executive vice president.

Mr. Legge, who has spent his entire business life with the Howard mills, gave reasons of health for his resignation, but announced that he will remain a director of the company, and will continue to serve on its executive committee.

W. B. Zimmerman, new Howard President, has also spent the major portion of his business life with the Howard organization.



Public Printer Raymond Blattenberger (l.) presents $3 million check, resulting from economies at the Government Printing Office, to George M. Humphrey, Secretary of the Treasury.

Gov't. Reduces Offset Charges

Return of $3 million dollars to the U. S. Treasury was made by Public Printer Raymond Blattenberger, Jan. 10, almost on the anniversary of a similar voluntary reduction in capitalization last year of $5 million.

"This sum," said Mr. Blattenberger, "represents savings due to economies in operations I have effected over and above the general five percent reduction in labor charges for printing placed into effect on February 1, 1954. We have reduced our overhead expenditures by more than $1,000,000, have absorbed wage increases amounting to $600,000 which are provided by law, and are currently announcing reductions in our charges for offset printing, which in some operations will amount to 25 percent."

Mr. Blattenberger pointed out that the $5 million windfall had been returned in 1954 because he considered it to be in excess of operating requirements.

"After an additional year of operation," he continued, "a review of the fiscal condition of the Revolving Fund has resulted in my decision to return an additional $3,000,000 to the Treasury of the United States."

Coinciding with the capitalization cutback action the Public Printer announced to agency heads that the scale of prices for certain offset operations was being further reduced. When the five percent reduction in all charges was made effective in February, 1954, it was the first lowering of Federal printing costs in more than 20 years.

The newest scales apply to text, line and halftone negatives; blueprint, Vandyke and ozalid proofs; and the hourly charges for negative cutting, stripping and blocking out for color.

"I anticipated these present reductions in the scale when I organized our offset operations under a single directing head last March", said the Public Printer. "It seemed obvious to me that the Government Printing Office offset facilities and organization had outgrown the procedures established when this process was introduced in the Office. I was confident that greater efficiency and economy could be effected. As a matter of fact, the decreases do not go as far as I hope they will in the very near future. The Offset Division has been functioning as a single unit only since March of last year and I have been greatly encouraged by the progress that has been made in improving operating procedures."

DMAA Convention Date Set

Direct Mail Association of America will hold its 1955 convention at the Morrison Hotel, Chicago, Sept. 12-14. Officers suggest that immediate reservations be made since accommodations at last year's convention were difficult to secure.

•

Canco Licenses Tokyo Firm

Continental Can Co has signed a service agreement with Toyo Seikan Kaisha, Ltd., Toyko, largest can manufacturer in Japan, it was announced recently by Lowell K. Hanson, general manager of Continental's Overseas Division.

Under terms of the agreement, the Japanese company, represented by M. Yoshikawa, managing director, becomes a licensee to use Continental's machinery, manufacturing processes and technical knowledge in the metal container field.

Toyo Seikan, a manufacturer of open-top and general line cans, has factories located in Shimizu, Osaka, Tobata and Tokyo. Continental has similar service agreements with other foreign container companies in more than 15 countries.

•

3M Names N. Y. Manager

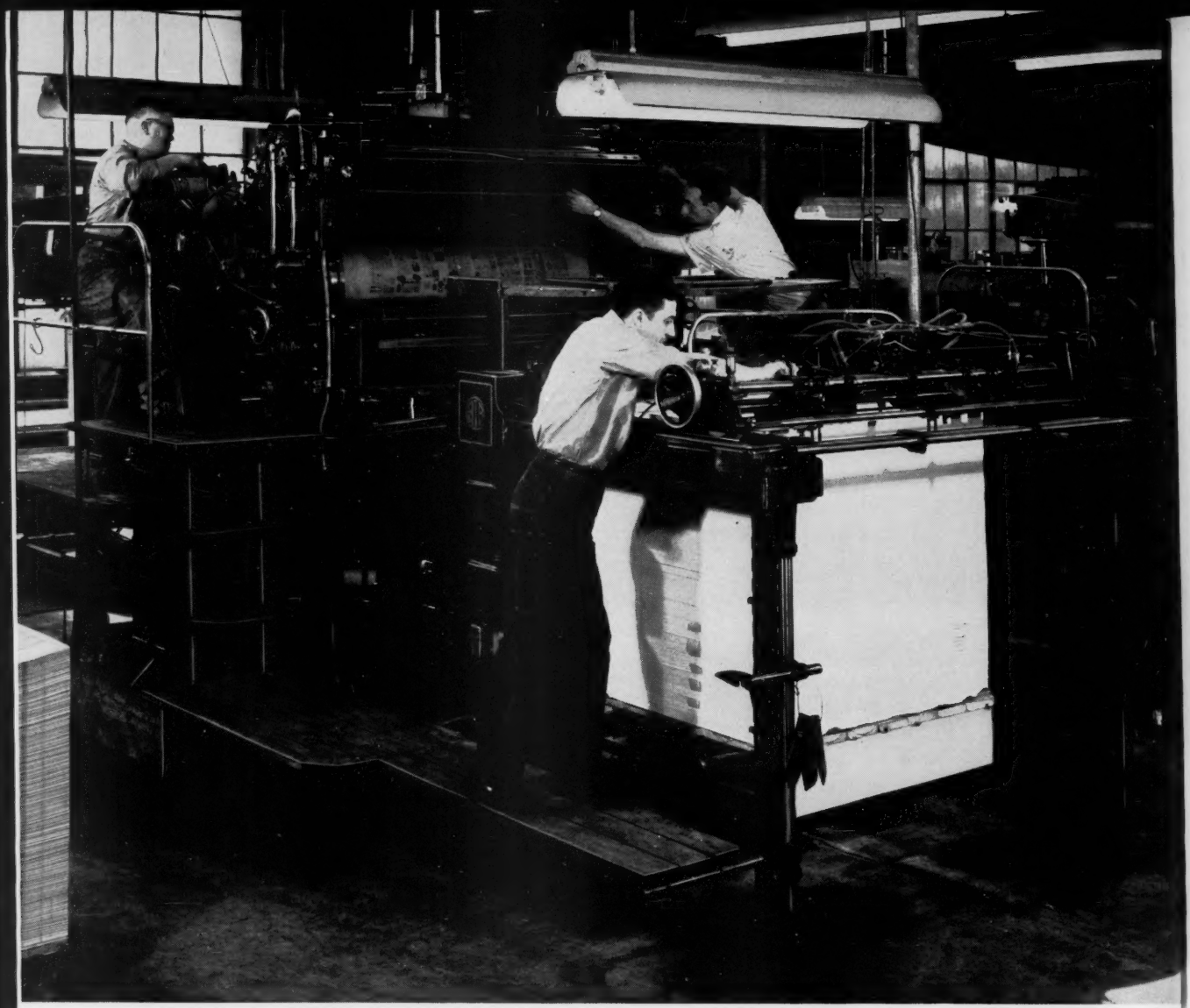
Advancement of George F. Murphy to New York sales manager, printing products division, was announced by Minnesota Mining & Manufacturing Co. last month.

Mr. Murphy joined 3M in 1951 as a lithographic plate and "Spherekote" brand products salesman in the New York city area. In 1953 he was made supervisor, with sales responsibility for these products in N. Y., N. J. and the New England area. He will continue to make his headquarters in 3M's New York office and will retain sales responsibility of his present territory and products.

•

Donnelly Officer Heads Drive

Edward B. Busby, vice president, R. R. Donnelley & Sons Co., Chicago, has been named general chairman of a committee of Chicago business men seeking to raise $100,000 to cover an operating deficit of Provident Hospital's nurses training school.



Mann Perfector does double duty for Midwest trade lithographer

Printing both sides of a sheet in one pass is winning friends for the Mann 53 x 38½ Perfector out at Chicago's Greenlee Co., Inc., nationally known trade lithographers.

"In this day and age," writes Glenn Holben, Greenlee's office manager, "speed is essential, both in makeready and the actual production of the press. In these respects your presses have come up to our most optimistic expectations."

Greenlee pressmen keep their double-duty Mann Perfector and another single-color Mann busy on advertising brochures, broadsides and black-and-white form work for the printing trade. "We can produce the work we have on a more profitable basis since acquiring the Mann press," Mr. Holben adds, "and the clearness and accuracy of the printed product is exceptionally good."

You'll get the whole story on the nation's first sheet-fed Perfector and other Mann presses from your ATF rep. Give him a call. American Type Founders, *a subsidiary of Daystrom, Inc.*, 200 Elmora Ave., Elizabeth, N. J. M-4-3

ATF

BETTER, MORE PROFITABLE PRINTING FROM THE WIDEST LINE OF PROCESSES

Gravure...Letterpress...Offset

Litho Club NEWS

Twin Cities Elect Officers

New leaders of the Twin Cities Litho Club were elected and installed at a meeting Jan. 6. Officers for 1955 are: Axel Lundgren, L. F. Dow Co., president; E. Sorenson, John Roberts, St. Paul, vice president; Paul Rudin, Brown & Bigelow, secretary; Marvin Haenze, Photomatic, Minneapolis.

Elected to the board of governors were: George Kueppers, Brown & Bigelow; Roger Strand and Len Holzinger, Photomatic; Rune Hedenskoog, H. M. Smyth, St. Paul; and Norman Albrecht, Offset Service, Minneapolis.

Barney Skomar, Offset Service, and Herman Goebel, Brown & Bigelow, represented the Club at N.A.C.L. Regional Council meeting in Chicago, Jan. 29.

Howard Lang, Flint Ink, Minneapolis, was initiated into the Club as an associate member of the group.

Retiring president of the Twin Cities Litho Club, Barney Skomar (l.) receiving a gift of appreciation from Herman Goebel.

A closed TV demonstration has been proposed, sponsored by L.T.F., showing latest methods in lithography. Printing Industry of Twin Cities, Amalgamated Lithographers of America, Local #10, Graphic Arts Industry, Twin Cities Employers Association, and Twin Cities Litho Club will cooperate in the venture.

Houston Holds 1955 Kickoff

January meeting of Houston Litho Club started the year with a large turnout, a barbecue, and Dorsey Biggs speaking on "Dry Offset" and "Photo Typesetting."

Past presidents William Dodd, William Kauzlarich, and Warren Childers attended as well as new president, Elwood Sayers.

Mr. Gibbs, American Type Founders, illustrated his talk with slides of drawings on the methods used by the various photo typesetting machines.

•

Baltimore Hears Color Expert

O. C. Holland, Director of Advertising, Interchemical Corp., printing ink division, spoke at Baltimore Litho Club's January meeting, Hotel Stafford. Mr. Holland's lectures on color are noted for their informality and entertaining manner of presentation. A seasoned lecturer and author on color and package printing, he is also an advertising man with wide experience.

Annual Oyster Roast will be held at Hasslinger's, Baltimore, Feb. 19. Tickets at $4.25 per person are available from Wallace Williamson, chairman, entertainment committee, American Type Founders, Inc., 101 W. Pratt St., Baltimore, Md.

•

Cleveland Activities Planned

January meeting on the 27th was Eastman Kodak Night, with Fred Dippong, associated with Eastman's stores, Cleveland, in charge of the evening.

Two new members of the Club are: E. D. Hill, president, Ohio Roller Co., associate member; and Karl Kleisch, pressman-foreman, Horn & Norris Co., active member.

New officers for 1955 are: Paul A. Meunier, R. E. May, Inc., president; Harold R. Johnson, Merrick Litho Co., vice president; Milton E. Cornman, International Printing Ink Co., secretary; Henry G. Prokupek, Central Litho Co., treasurer.

Feb. 24, the Club will hear a discussion on rollers by Dayton Roller Co. A plant tour of Art Gravure Corp., Cleveland, is planned for the March meeting.

Total membership of the Club at the start of 1955 was 247.

•

Milwaukee Club Has 3M Night

Jan. 25 meeting of Milwaukee Litho Club was Minnesota Mining & Manufacturing Night with Kenneth B. Murphy speaking on "How tough is a presensitized photo offset plate?"

Demonstrations on the uses of "spherekote" tympan covers were made by Mr. Murphy, assisted by Ronald A. Anderson, also of Minnesota Mining.

New officers for 1955 installed at the meeting were: Howard H. Beseke, president; Richard G. Krekel, vice president; Alan N. Williams, secretary; Gabriel Koncar, treasurer; and C. Paul Schneider, Sgt. of arms.

•

Craftsmen To Try Host Plan

An idea of the San Francisco Club and others, the Table Host Plan, will be in effect at the Feb. 17 meeting of Club of Printing House Craftsmen of New York, Inc. Harold McGirr, chairman of the Table Hosts, said the idea is to place a host at every table at the educational meeting to promote a general feeling of warm friendliness.

•

Philadelphia Plans Ladies Night

Crystal Ballroom, Benjamin Franklin Hotel, is the scheduled meeting place for Litho Club of Philadelphia's 18th annual Ladies Night, Feb. 12.

Dinner, entertainment, gifts for the ladies, prizes and dancing are planned for the evening, according to Harvey W. Webb, entertainment chairman. Reservations for the Ladies Night program must be in by Feb. 9, he said.

Lithographers Psychoanalyzed

Dr. Timothy Costello, associate professor of psychology, New York University, proved two things to New York Young Lithographers at the Jan. 12 meeting. After the speaker submitted 12 words for thought association to the 40 members and guests, results proved that people taken in groups are predictable as to behavior and reactions. However, Dr. Costello emphasized that each individual had to be considered separately because his reactions to life were governed in part by his own personal background, including hereditary instincts.

Psychology for the salesman, executive, production man, or anyone whose business involves dealing directly with many people, was shown to be a powerful tool.

Dr. Costello is consulting psychologist for New York Central Railroad, Bankers Trust Co., and many other organization.

Kurt E. Heinrich, president, announced that nominations for new officers of the club would be submitted at the Feb. 9 meeting. The speaker, according to Robert Lewin, program chairman, will be George Stahl, one of the country's youngest and most successful packaging consultants.

•

Chicago Club Installs Officers

Chicago Litho Club's Jan. 27 meeting was inauguration night for the new slate of 1955 officers elected last November. Retiring president, Ralph H. Graham, Continental Can Co., metal decorating department, turned the gavel over to Rae H. Goss, Inland Lithograph Co., president for 1955.

Other new officers sworn in included Willis B. Perry, Offset Plate Making Service, Inc., first vice president; James N. Ludford, Chicago Litho Plate Graining Service, second vice president; W. Stuart Grau, Miehle Printing Press & Mfg. Co., treasurer; and Fred L. Faulkner, Chief Printing Co., secretary.

Guest speaker of the evening was Floyd Larson, civilian director of the U. S. Navy's printing plant, Great Lakes, Ill.

Feb. 5 was scheduled as the Club's annual Ladies Night dinner-dance at Chicago Sheraton Hotel.

"Litho in U.S.A." Promotion

Theme for Printing Week, "Litho in U.S.A." was used by Litho Club of Philadelphia featuring a large display panel located in the Benjamin Franklin Hotel showing samples of lithographic printing on cloth, plastic, metal and paper.

Philadelphia singer and entertainer, Elaine Duffaine, assisted the club with the distribution of pamphlets and badges.

Stephen Rubenstein, Colorcraft Litho Plate Co., and Joseph Winterberg, Phillips & Jacobs, have lined up a panel of experts for the annual quiz night, Feb. 28, at Poor Richard Club.

•

Boston Sets Spring Meetings

The calendar for future meetings of the Boston Club of Printing House Craftsmen is as follows:

Feb. 14: T & H Calendar Night, Melvin Loos, critic, at the Harvard Club.

March 21: "A Trip Through America's Best Small Shops", Frank Bellock, speaker, Miller Printing Machinery Co.

April 4: Combined meeting of the Litho Club and Craftsmen, "Which Way Should it be Printed, Offset or Letterpress?" will be discussed in a panel program. Elmer Grover, Case, Lockwood & Brainard will be the moderator.

May 16: Tricks of the Trade Night.

•

Wash. Litho Hears Wampler

"Engineering applied to printing" was the theme of Washington Litho Club's January meeting at the Continental Hotel. Howard P. Wampler, Waverly Press, Inc., Baltimore, spoke on "From copy to press".

Mr. Wampler will be remembered as delivering an interesting address at the second Makeready and Premakeready Conference of the Research and Engineering Council of Graphic Arts Industry in 1953.

Mr. Krebs, president of the Club, represented the group at the National Association of Litho Clubs at the midwinter Council meeting in Chicago, Jan. 29.

•

Cincinnati Elects President

John E. Hennegan, The Hennegan Co., was elected president of Graphic Arts Association of Cincinnati for 1955. He succeeds William A. Kleesattel, Feicke Printing Co. Other new officers are: vice president, Albert M. May, Alfred M. May Co.; and treasurer, Reuben W. Bohnett, the Bohnett Co. E. P. Rockwell continues as managing director.

Directors are Wayne W. Hogan, Methodist Publishing House; Robert C. Krehbiel, Jr., C. J. Krehbiel Co.; Wilbert Rosenthal, S. Rosenthal and Co., Inc.; Mr. Kleesattel and the officers.

•

Memphis Installs Officers

Bates Brown, S. C. Toof & Co., conducted installation ceremonies for the Memphis Printing Industries, Inc., recently in the Catholic Club, Memphis. New officers are: Francis J. Brunner, Brunner Printing Co., president; Richard Davis, Davis Printing Co., vice president; Maurice Mansfield, E. H. Clarke, Co., treasurer; and Charles P. Hackett, executive secretary.

Directors elected were: Messrs. Brunner, Davis, Mansfield and Brown, Robert Kirkpatrick, Rodney Baber, Jack Belote, William Edge, Jr., and N. C. Jamison.

•

Rosback Golden Anniversary

During 1955, F. P. Rosback Co., will maintain Open House in celebration of 50 years of progress in Benton Harbor, Mich.

The company suggests that if visitors are coming from the east they will be met at the train at Niles, Mich., or South Bend, Ind., or at the airport. Train service from the west (Chicago) is direct.

New officers for 1955 New York Litho Club are: (l.-r.) Robert Watson, treasurer; Don Rovegno, president; and Daniel Ford, vice president. Tom Cavallero, not shown, is secretary.

New members of board of governors, New York Litho Club, are: Louis Happ, Kindered Maclean Co.; William Glover, Sweeney Lithographing Co.; Oscar Falconi, Daniel Murphy Co.; Don Rovegno, Sweeney Lithographing Co.; Rene F. Daubenbis, Offset Engravers Associates, Inc.; Daniel Ford, Peter F. Mallon, Inc.; Joseph Rauscher, American Colortype Co.; and Robert Watson, American Colortype Co.

N. Y. Made Color Conscious

O. C. HOLLAND, Interchemical Corp., Printing Ink Division, talked to more than 100 members and guests of New York Litho Club, Jan. 26, on color effects, pointing out the ease with which the eye can be fooled. Stating that quantity as well as quality of color was of prime importance, Mr. Holland illustrated the point with vari-colored panels and dies on different backgrounds.

Primary "light" colors are red, green, and bluish-purple because when each overlaps a white light results, the reverse prism effect, he said. However, overlapping two of these colors gives, in the three possibilities, red, blue and yellow, colors with which lithographers work as primary colors. They really are secondary colors or "subtractive" colors according to Mr. Holland.

Printing red, yellow and blue in transparent inks, results in a black at the overlapping point; but it is not an absolute black. Mr. Holland illustrated the fact that with the three colors in three shadings, 39 different colors can be produced.

Joining two ends of the spectrum of colors into a circle and inscribing a triangle and a pointer inside, he showed how to easily select complimentary, harmonizing colors. Importance of considering texture was shown by the use of "live" pears, tomatoes, bananas and avocados.

Advising the group to use grey tones, Mr. Holland pointed out that interior decorators know the basic principle that grey is "safe" and seldom can offend anybody.

How to display silver effectively and pitfalls of Christmas colors, red and green, were described.

Jack MacGuire, past president, National Association of Litho Clubs, installed the following new officers for 1955:

Don Rovegno, Sweeney Lithograph Co., president; Daniel Ford, Peter F. Mallon, Inc., vice president; Tom Cavallero, Schlegel Lithographing Corp., secretary; and Robert Watson, American Colortype Co., treasurer.

•

Henry H. Johnson Moves

Henry H. Johnsen Co., Inc., has moved into a new building at 1264 Boylston St., Boston. Formerly located at 57 Mountfort St., the company has been in operation since 1932.

The new plant is laid out on a single floor.

LITHO CLUB GUIDE

BALTIMORE
Clarke J. Fitzpatrick, Jr.
36 East 25th St.
Baltimore 18, Md.

BOSTON
Thomas J. Cain, Secy.
Hub Offset Co.
175 Purchase St., Boston 10

BUFFALO
Vic Reisch, Secy.
33 Eiseman Ave., Kenmore 17, N. Y.

CANTON, Ohio
Jack R. Reinart, Secy.
1012 Maryland Ave., S.W., Canton

CHICAGO
Fred L. Faulkner, Secy.
Chief Printing Co.

CINCINNATI
Ralph Eckard, Secy.
Nielsen Litho. Co.
4142 Airport Rd.
Cincinnati 26, Ohio

CLEVELAND
Milton Cornman, Secy.
[PI]
1325 W. 73 St., Cleveland 2

CONNECTICUT VALLEY
Leslie E. Phillips, Secy.
N. Maple St., Hazardville, Conn.

DALLAS
E. D. Malone,
Southwest Printing Co.
Dallas, Tex.

DAYTON
Doug Webb, Secy.
3410 N. Main St.
Dayton, Ohio

DETROIT
John Murphy, Secy.
13110 Santa Rosa, Detroit

HOUSTON
Chloe Lee Mallett, Secy.
2104 Wichita, Houston

MILWAUKEE
Dick G. Krekel, Secy.
5720 W. Thurston Ave.
Milwaukee 16, Wis.

NEW YORK
Tom Cavallero
Schlegel Litho. Corp.
2nd Ave. & 22nd St., New York
Meets 4th Wednesday, Building Trades Club

ONTARIO
Robert Elgie, Secy.
R. G. McLean, Ltd.
26 Lombard St., Toronto, Ont.

PHILADELPHIA
Joseph Winterburg, Secy.
622 Race Street, Philadelphia 6
Meets 4th Monday, Poor Richard Club

QUEBEC
Dave Riddell, president
Montreal Litho. Co., Montreal, Canada

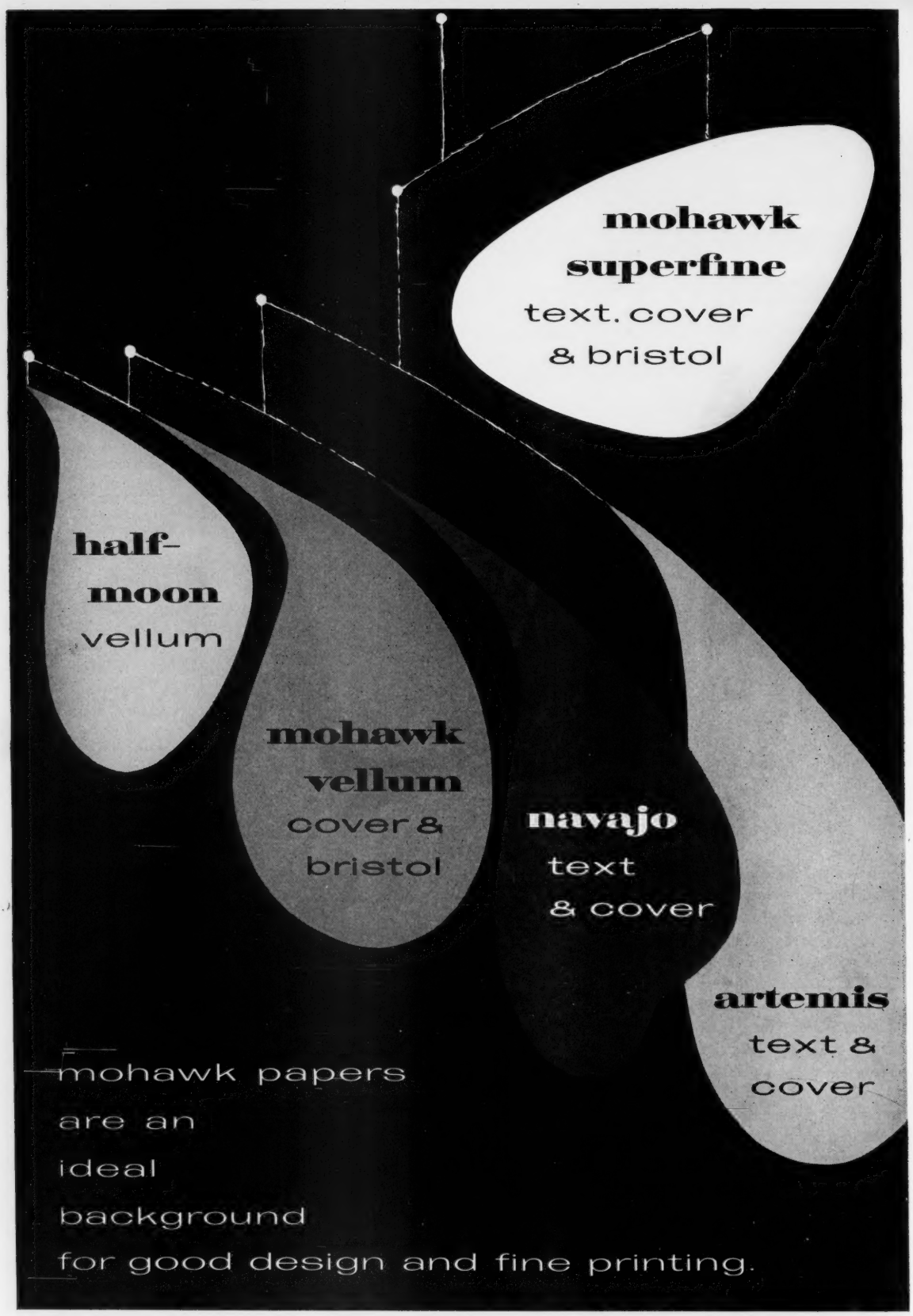
ROCHESTER
Roy Bippes, Secy.
Box 401, 87 Pleasant Ave., Pt. Pleasant, N. Y.

ST. LOUIS
Neil McGowan, Secy.
Missouri Prtg. & Engr. Co.
3160 Easton, St. Louis

TWIN CITY
Paul Rudin, Secy.
Brown & Bigelow
Quality Park, St. Paul 4

WASHINGTON
H. Thos. Driver, Secy.
PO Box 952, Benj. Franklin Sta.
Washington, D. C.
Meets 4th Tuesday

NAT'L ASS'N OF LITHO CLUBS
Frank Mortimer, Exec. Secy.
Govt. Printing Office, Washington, D. C.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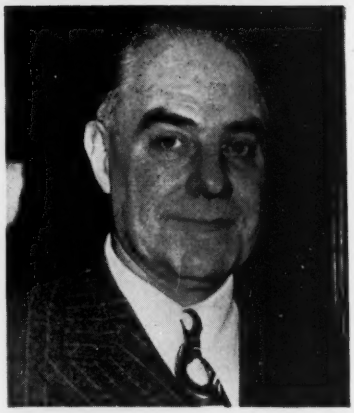
artemis
text &
cover
mohawk papers
are an
ideal
background
for good design and fine printing.



Alfred A. Tickle

Alfred Tickle Dies

Alfred A. Tickle, 62, president, Arthur Tickle Engineering Works, Brooklyn, died Jan. 3, in Long Island College Hospital. (Jan., Modern Lithography.)

Mr. Tickle was the son of the late Arthur Tickle, founder of the special-machinery manufacturing company.

•

Calder Named VP in Canada

Board of directors of Mallinckrodt Chemical Works Ltd., Montreal, named Douglas S. Calder vice president and general manager. He was also elected to the board of directors.

Dr. Calder was previously with Dominion Tar & Chemical Company, Ltd., as assistant to the vice president and before this was vice president in charge of operations with Standard Chemical Company, Ltd., Toronto.

•

40-Year-Old Press Scrapped

Harry A. Porter (center), senior vice president, Harris-Seybold Co., and Jack J. Howard (r.), president, Crane-Howard Lithograph Co., Cleveland, look at the original contract for this 40-year-old Harris press being scrapped by Crane - Howard. Harry Porter was sales manager for Harris Automatic Press Co. when the Harris Model S8L, 28x42" single-color press was purchased in 1915. Starting the dismantling is Joseph Wolf, pressman at Crane-Howard who worked on this press for many years. Mr. Howard says that the press was still producing good work, but that production was not high enough to compete with his newer multicolor Harris presses in the Howard plant.

Tarling Named Sales Manager

Charles Hellmuth Printing Ink Co., New York, announced the appointment of Arthur J. Tarling as sales manager, last month. Mr. Tarling is past president of the Printers Supply Salesmen's Guild, currently chairman of Graphic Arts Blood Bank, member of Club of Printing House Craftsmen of N. Y. and the Litho Club. He is serving on the board of directors of both the latter organizations.

•

New Office for Phila. Association

A two-story office building to house administrative staff of Printing Industries of Philadelphia, Inc., is being built at a cost of $115,000 at the northwest corner of 19th and Cherry Sts., Philadelphia. Construction of the building, to be completed this year, began Jan. 20, according to Ballinger Co. spokesman, architects and engineers.

Printing Industries of Philadelphia, listing 242 member firms, represents about 30 percent of the total Philadelphia graphic arts companies, producing 75 percent of the city's printing volume.

•

New York Lithographer Expands

Carl Strahle, Printers and Offset Lithographers, moved Jan. 17 from 470 Greenwich St., New York City, to new and expanded quarters at 380 Canal Street. Part of expansion program included addition of a new Miller E.B.CO 22 x 34 Offset Press.

Charles F. King

Calvert Names King VP

Charles F. King was elected executive vice president of Calvert Lithographing Co. it was announced recently by William H. Sills, chairman of the board. He will collaborate with Robert A. Ritter, president, on all phases of management of the company.

Mr. King has, for the past 20 years, held technical and managerial positions in the graphic arts industry. He was one of the first technical men to be employed by a printing and lithographing company and was one of the first to be assigned the problem of adapting statistical quality control methods to the printing industry.

He has been with the United States Printing and Lithographing Co., Cincinnati, for the last eight years, during this time serving as assistant general superintendent of the Cincinnati plant, and as director of control and development. Mr. King's first position in the industry was with Woodward & Tiernan Printing Co., St. Louis.

•

Sleepeck Re-elected

William H. Sleepeck, president, Sleepeck-Helman Printing Co., was re-elected president of Graphic Arts Association of Illinois, Inc., at the organization's 30th annual meeting at the Sheraton-Blackstone Hotel, Chicago, Jan. 19.

Also elected were:

John H. Goessele, Jr., C. O. Owen & Co., Maywood, Ill., first vice president; Norman B. Jacobson, The Huron Press, Chicago, second vice president; Fred C. Landis, Logan Printing Co., Peoria, Ill., third vice president; and Charles J. Farwell, Jr., C. J. Farwell Co., Chicago, treasurer.

Trade Customs Booklet Due

Midwest Litho Trade Association expects to release shortly a booklet of definitions and rules governing trade customs and practices on estimates, quotations and other matters arising in business relations of the plate makers with their customers. Final approval of the new code was given at the Association's Jan. 4 meeting in Chicago. George A. Mattson, executive director, Chicago Lithographers Association, was the guest speaker at the meeting and discussed the litho industry's labor relations problems.

There will be no radical changes in the trade practices as set forth in the new code, stated Lester von Placheki, proprietor of Von Studio and a leader in the work of formulating the rules.

New president of the Association this year is Phillip Heinz, president, Precision Color Plate Co. William Polzin, A.B.C. Litho Plate & Graining Service, is vice president.

•

Capacity Enrollment in Chicago

Board members of Chicago Lithographic Institute entertained members of the school's teaching staff at a dinner at Lake Shore Club prior to opening of the Institute's second semester, Feb. 1. Capacity enrollment in the regular apprentice craft classes for the term was reported by Albert N. Brown, school manager.

Mr. Brown said that an advance discussion class in color separation, masking, etc. will be started Mar. 1 to accommodate color cameramen.

•

Outdoor Ad Art Winners in March

Art Directors club of Chicago will announce award winners in its 23rd national competition and exhibit of outdoor advertising art at a dinner, Mar. 17, Sheraton Hotel, Chicago.

Gold, silver and antique bronze medals will be given as prizes for "Best in Show".

Outdoor Advertising, Inc., will publish the 1955 edition of The Poster Annual, a reference and text book carrying reproductions of prize winners, the "100 best posters" selected from the show and other posters having merit in copy, art, or design.

Mohan Succeeds Clifford at Crown

John J. Mohan has been appointed manager of Chicago and Milwaukee district branches of Crown Cork & Seal Co. Previously, Mr. Mohan had been manager of Atlanta, Ga., branch. He succeeds Robert Clifford who retired Dec. 31.

•

Folding Carton Manual Revised

Folding Paper Box Association of America has released a 56-page revised edition of its manual, "The Folding Carton". Illustrated text tells the history of the industry, describes manufacturing processes, explains economic status of the folding carton, and appraises its place in mass merchandising.

Cartons, the booklet states, are manufactured in about 500 plants, employing 50,000 persons, representing an estimated investment of $115,000,000. In 1953, paperboard tonnage for folding cartons was 2,639,900. tons and the industry's dollar volume of sales was $703,648,754.

Lithography's part in the printing of folding carton is discussed in the manual.

Blomquist Joins E. H. Walker

Herbert W. Blomquist was appointed sales manager for E. H. Walker Supply Co., Inc., Washington, D. C., effective Jan. 1, according to E. H. Walker, president.

Mr. Blomquist will have full responsibility for developing sales, advertising and sales promotion and will make his headquarters at the company's main office in Washington, D. C. He previously held managerial positions with the Harris-Seybold Co., American Type Founders, Duplex Printing Press Co. (now part of Goss), and the Davidson Corp.

•

New Safety Council Series

"Safety in the Pressroom," new National Safety Council poster series illustrates the specific hazards of pressroom operations. Twelve posters covering hazards of feeding and running presses, falls, smoking, lifting, proper work dress, handling of skids and dangers of moving machinery were prepared by Council's printing and publishing section in collaboration with Education Council, Graphic Arts Industry.

Missouri Daily Switches to Offset

A NEW ATF-Webendorfer web fed offset press now is turning out the *Independence Daily News*, at Independence, Mo., one of the few daily newspapers in the country to use this type of reproduction.

The press was installed in October in the plant of the Craig Siegfried Publications. This company produces the *Daily News*. The Pictorial Shopper, seven other publications for customers, a weekly, and some circular and other advertising work.

Established in 1939, the Craig Siegfried Publications is owned and managed by Craig Siegfried who is also associated with Radio Station KIMO of Independence. The *Daily News* was established in 1900.

According to Tuck Stadler, *News* city editor, the installation and use of the offset color press involved an investment of over $50,000, but he says the management is confident it will pay off in faster and better production and the two- and three-color work they can give advertisers.

The press feeds two 34 inch webs, all black, or one web in two colors. Speed of the press when running the *Daily News*, which is a 16 page tabloid, is 13,000 16 page tabloids per hour. Size of the newspaper page is 10¾ x 16″. Circulation of the newspaper is 15,000.

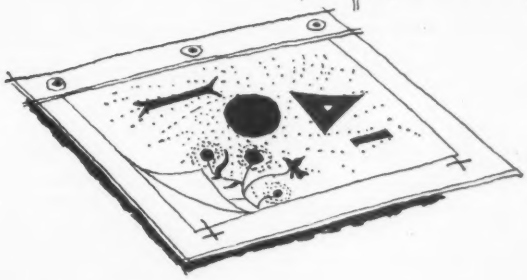
In addition to the company's own daily newspaper, the Craig Siegfried Publications turn out seven weeklies of from eight to 16 pages each, usually in black and white and one color, on the new offset press. Advertising materials in black and one color also are produced. Zinc albumen plates are used.

The *Independence Daily News* is the oldest newspaper in Independence and the new press promises even greater progress.

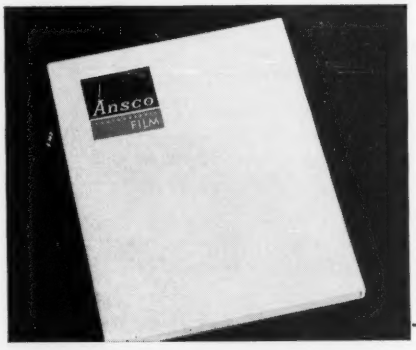
For strip-ins. . . . . .

For lateral reversals. . .

For overlays. . . . . .



You'll find that good work goes through faster when you use Ansco Reprolith Ortho Type B Thin Base Film



This *fast* emulsion gives you the time-saving advantages of short exposures . . . *plus* full orthochromatic color sensitivity that permits the use of filters to improve the rendering of colored copy, and eliminate much hand work. In addition the *really* thin low-shrink safety base (only .0035" thick) allows you to do strip-ins, lateral reversals and overlays.

Put Reprolith Ortho Type B Film on the job in your shop. It will improve your production methods.

Ansco Binghamton, N. Y. A Division of General Aniline & Film Corporation. "*From Research to Reality.*"

In the Graphic Field it's Ansco

Equipment

SUPPLIES, BULLETINS

Film in 25-Sheet Boxes

Du Pont photographic sheet films, sizes 2¼ x 3¼ to 8 x 10", are now packaged in 25-sheet units instead of 24. Films of 10 x 12" size and larger are being packaged in units of 10 sheets instead of 12. Prices have been changed accordingly.

The 24- and 12-sheet packages will not be available after present stocks are exhausted, the Company's photo products department announced.

•

New Long-Life Developer

Hunter Hecco-kwik developer, a new photo copy developer, contains a long-lasting chemical that retains full developing strength within the machine for a full work week, according to Hunter Photo Copyist, Inc., Syracuse, N. Y.

In addition to the long-lasting quality of the new chemical, the company said that a second finished copy can now be obtained from a single exposed negative under certain conditions.

•

Lubrication on Rotary Presses

A new use for a "tacky" type lubricant recently put on the market by Magnus Chemical Co., Garwood, N. J., is revealed in the following operation, according to the company.

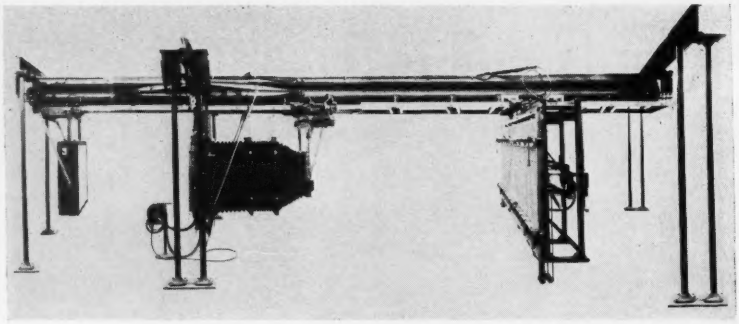
In the reference plant, an ordinary lubricating oil was used to lubricate a number of rotary presses. Daily oil consumption per press was in excess of 3½ gallons. Lubrication had to be frequently repeated and loss of oil was severe. By using Magnus Kling-Oil, one gallon per press, per day, frequency of manual lubrication has been reduced and oil drip has been eliminated.

•

Hillmer Photo-Composing Machine

Four-page pamphlet detailing the H. Hillmer photo-composing machine now available to lithographers and photo-engravers has been released by Printing Engineers, Inc., Omaha, Neb.

Specifications include: floor space, 40 x 50 inches; maximum printing size, 17½ x 22½ inches; height, 55 inches; table space for measuring unit, 16 x 48 inches; shipping weight, 1,625 lbs.



One of Lanston Monotype Corp.'s "small" cameras, a M-H precision overhead phototemplate camera, has equipment specifications as follows: length—38 ft.; width—15 ft., 8 inches; height—10 ft.; weight of template vacuum copyboard—two tons; weight of maximum template accommodated—four and one-half tons. The equipment was designed to handle armor plate templates. Lanston chided ML for an article in December which said that a featured camera was "claimed as one of the world's largest . . . probably the most massive, rigid and heaviest of any camera ever built". Says Lanston, "Not that we like to brag, but we believe this M-H camera is probably the world's largest and most precise camera. Are there any takers?"

"Bullard's Alphabet" Published

A 536-page comprehensive type book containing more than 2,200 different fonts, shown in specimens and complete alphabets from 4-point to 144-point, of linotype, monotype, ludlow, foundry type, ornaments and decorative material is available from H. O. Bullard, Inc., New York.

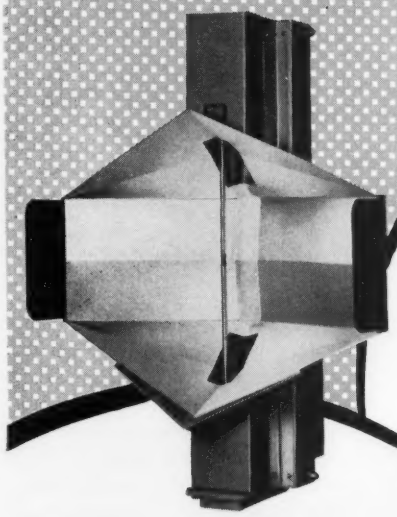
A section devoted to copy preparation, copy fitting, proofreader's marks, is included as well as specimens of more than 50 photo-lettering styles.

Ralph Specce, president, said that each body face and size is presented in a paragraph of specimen copy in addition to a complete alphabet, with

They Really Save You Money!

Strong GRAFARC

Fully Automatic, High Intensity Arc Lamps



There is a BIG difference in arc lamps. Strong Grafarcs, alone, give you all these advantages:

- Models for all photo-mechanical reproduction processes — for saving money on every job while making it easier.
- Cut plate-making exposure time in half.
- Uniform coverage of large areas.
- Constant color temperatures.
- Eliminate illumination variables in accurate control of densities, regardless of line voltage variations.
- Sharper reproduction.
- Eliminate dot undercutting.
- Power to punch through dense Kodachromes.

You'll junk your present lamps when you see the Grafarc! Impressive comparative tests demonstrate their superiority. You'll be convinced if you ask others what they think of Strong lamps. There are enthusiastic owners everywhere. Or, better yet, arrange for a demonstration by your dealer.

See the amazing new, low-cost Challenger Camera Arc Lamp. A vertical trim lamp which burns at 75 amperes and 23 volts at the arc. Light in weight. Readily mounted on the lamp support arms of any camera.

THE STRONG ELECTRIC CORP.

17 CITY PARK AVENUE — TOLEDO 2, OHIO

Please send free literature on Strong Grafarc Lamps.

NAME_____

FIRM_____

STREET_____

CITY & STATE_____

NAME OF SUPPLIER_____

characters-per-pica showings. Pages may be snapped in and out for tracing or comparison.

A 16-page booklet outlining the volume's complete contents may be obtained from H. O. Bullard, Inc., 150 Varick St., New York 13, N. Y.

•

Stop Offset Dry Spray

Ortman-McCain Co., Chicago, describes its Stop Offset Dry Spray equipment in a four-page illustrated folder published recently. The unit itself, together with orifice nozzles, moisture eliminator, timer, head units and portable compressor are pictured and their operation described.

•

Lith-Kem-Ko Has Cold Room

Litho Chemical & Supply Co., Lynbrook, L. I., N. Y., has completed construction of a new refrigerated room for storage of pre-sensitized offset plate. New room is large enough to handle a complete stock of all sizes of pre-sensitized plates according to the company.

65 Years Covered in S. & V. Booklet

"Ink Horizons" is a new booklet just released by Sinclair & Valentine Co., observing its 65th anniversary this year. The booklet traces the background and technical development of the company.

•

Photon Exhibited in April

A new Photon model on which production is being standardized will be shown at the ANPA convention, New York, in April. Projected production for 1955 is 35-55 machines. Company officials said that by January, 1956, production should reach 10-12 machines per month.

Photon exhibit panels were shown at the Assoc. Industries of Mass. exhibition "What's New in Industry", held in Boston recently.

•

Falconer Moves In Baltimore

Falconer Co. recently moved to a new building at 6001 Erdman Ave., Baltimore, giving the company 50,000 square feet of floor space. Falconer manufactures bank supplies, publishes technical manuals, and manufactures and distributes Universal Savings Stamp System.

•

Harris-Seybold Publish Directory

A new eight-page directory of equipment for the graphic arts industry is now available, without cost, from Harris-Seybold Co.

Full-color photographs showing many kinds of printed material and photomicrographs of offset, letterpress and gravure color-process printing, magnified to 100 diameters are included.

•

Trundle in Tennessee

Ideal Roller & Manufacturing Co., Inc., has named Robert R. Trundle as sales representative in Tennessee, with headquarters in Nashville.

Mr. Trundle began his graphic arts career as an apprentice pressman in Chattanooga, later establishing a printing and engraving shop there with his brother.

B & J Has New Products

Four new pieces of equipment were recently announced by Burke and James, Inc., Chicago.

An improved tripod taking up to 8 x 10" cameras with a platform of solid aluminum, diameter of three and one-half inches is now available.

Recently marketed is a metal contact printer for negatives up to 8 x 10", paper size up to 11 x 14", individual light switch control, seven bulbs and ruby lamp, diffusion glass with variable levels and many other features.

Princeton camera is now being sold, listing advantages such as operation in both horizontal and vertical positions, metal stand with doors and compartments, available with standard cut film holder backs, sizes 11 x 14" to lantern slide size.

A new giant timer with an eight inch diameter dial with instantaneous zero reset button is being sold by B & J. Timer can be stopped or started without resetting to zero.

•

Bridgeport Sells Fotoplate

Bridgeport Engravers Supply Co., Bridgeport, Conn., have been appointed distributors for Warren Fotoplate, it was announced by the company last month.

Warren Fotoplate is a presensitized paper offset plate for line or halftone work on medium length runs. Bridgeport will carry complete stocks of Warren Fotoplate in all company branches including Bridgeport, Boston, Chicago, Cleveland and New York.

•

Halftone Art Service Offered

Harry Volk Jr. Art Studio, Pleasantville, N. J., has announced a new continuous tone art service, issued on a monthly basis. Volk organization is the originator of "Clip Books of Ready-to-Use Art," a service of line drawings.

New service will offer regular monthly supply of continuous tone drawings, rendered in wash, tempera, casein and other media by freelance artists. Subjects will be reproduced for distribution by a screenless printing method enabling subscribers to size and screen drawings to their own requirements.

•

Howard Letterhead Portfolio

A new Howard Bond letterhead portfolio is currently being offered to advertising, sales, and graphic arts executives.

Saul Bass, Bruce Beck, Will Burtin, Freeman Craw, Louis Dorfsman, Morton Goldsholl, Jerome Gould, and Dan E. Smith are contributing designers who created a new letterhead for a leading American company. Each is sampled in full size, showing on accompanying "work-sheets" the design-thinking that went into creation of the finished letterhead.

Copies, while the quantity lasts, will be available through distributors.

•

Fisher Releases "Processall"

A low cost, universal portable photographic film and paper processing unit, "Processall" has been announced by Oscar Fisher Co., Inc., Peekskill, N. Y.

Proper control of the fountain solution is one of the most important details of offset press work. With Besco Fountain Solution you are assured of perfect pH control. It keeps the plate desensitized, prevents roller stripping, gives good clean, sharp impressions. Can be used with zinc or aluminum. Try it in your presses today.

PRICES

1 Gal	$6.00
4-1 Gal.	$6.00 less 5%
12-1 Gal.	$6.00 less 10%
1 Qt.	$1.75

BRIDGEPORT ENGRAVERS SUPPLY CO.
BRIDGEPORT 2, CONNECTICUT
BOSTON: 287 Atlantic Avenue • CLEVELAND: 1051 Power Avenue
NEW YORK: 525 W. 33 Street • CHICAGO: 900 N. Franklin Street

LTF Annual Meeting Set

W. E. Griswold, executive director, Lithographic Technical Foundation, announced Feb. 28-Mar. 3 as dates for the annual meeting in Chicago, Conrad Hilton Hotel.

Members received a tentative agenda two weeks ago which listed the following activities: LTF educational committee meeting will convene at 10 a.m., Feb. 28, to hear a review of 1954 program and accomplishments. Discussions of in-plant training, school, and special training programs are scheduled. Later, presentation of 1955 program will be given as well as discussion of decisions of the executive committee's meeting, Jan. 25, report of priorities' committee, discussion of special projects including industrial arts press, courses and materials, and presentation of educational committee's recommendations to annual board of directors' meeting.

LTF research committee meeting will start at 9:30 a.m., Mar. 1, with a report on progress on research projects including plate-making studies such as diazo and casein coatings, pre- and post-treatments, substitutes for gum Arabic and chemical deposition of copper on zinc and graining studies.

In the afternoon, progress reports on color reproduction, photo-masking, press inkometer, press dampening, and quality studies will be heard.

Morning session, Mar. 2, will have M. H. Bruno and LTF staff presenting reports on army and air force contracts, paper and ink studies, ink transfer during printing, tinting, pick tester survey, other lab activities and survey of plant problems.

The afternoon will include reports of sub-committees and other miscellaneous business.

Z. W. Adams is chairman of the research committee meeting.

Fee for attendance at all meetings, including lunch, Feb. 28, Mar. 1 and 2, will be $25. Fee for individual day is $8.50.

•

Campbell Named Ad Director

American Colortype Co., has announced the appointment of H. Addison Campbell as director of advertising & public relations with headquarters in New York.

A new business campaign as well as nationwide expansion of American Colortype's business in folding cartons, wraps, labels and inserts are immediate objectives of the program under Mr. Campbell's direction. Plans call for the use of direct mail, trade and business media and special promotions.

Prior to joining American Colortype, Mr. Campbell was advertising manager of Lord Baltimore Press, and has held positions with American Broadcasting Co., and General Electric Co.

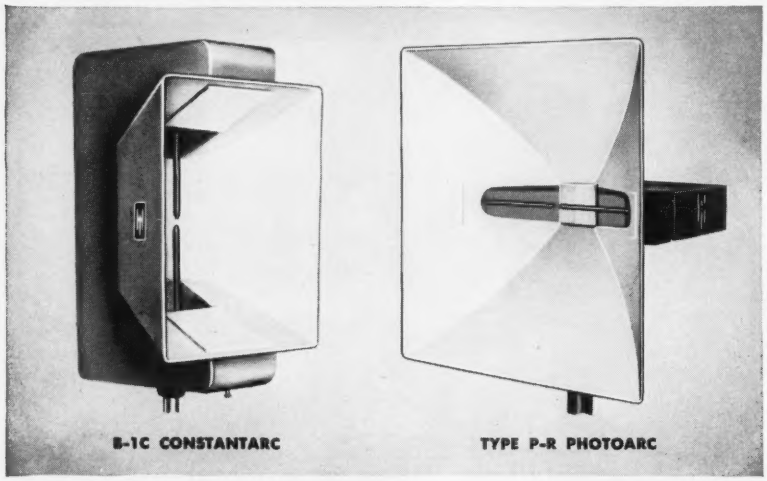
•

Chicago Firm Changes Name

Effective Feb. 1, Marshall-White Press and I. S. Berlin Press will be known as I. S. Berlin Press.

Marshall-White Press was organized as a wholly-owned affiliate of I. S. Berlin Press.

No change in personnel or operation is scheduled.



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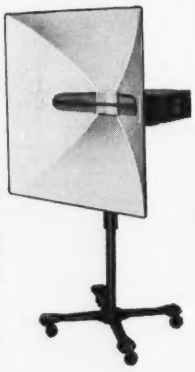

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TECHNICAL BRIEFS

(*Continued From Page 67*)

scribed. Current conditions and practices ni a number of plants have been reported in questionnaire form. A summary of this data is given on: type of air conditioning, temperature and R.H. standards, paper conditioning matters such as per cent conditioned, atmospheric balance, rough volume of color register work, use of the paper hygroscope. This work is intended to supplement published material with current operating conditions and problems, with a view toward avenues of improvement. TAGA Proceedings may be purchased for five dollars from the Secretary, George S. Hammer, Forbes Lithograph Mfg. Company, P. O.. Box 513, Boston, Massachusetts.

AN EXPERIMENTAL STUDY OF INK FILM THICKNESSES. D. N. Adams. *TAGA Proceedings*, Sixth Annual Technical Meeting, 1954, pages 194-206 (13 pages). This paper describes an experimental arrangement designed to measure the relative thicknesses of ink films existing on the ink storage drums of a Harris LTV Press under printing conditions. This experimental arrangement is based on the absorption of beta particles by the ink films. TAGA Proceedings may be purchased for five dollars each from the Secretary, George S. Hammer, Forbes Lithograph Mfg. Co., P. O. Box 513, Boston, Massachusetts.

THE BLEEDING OF INKS IN HIGH HUMIDITIES. H. H. Hull. *Ibid.*, pages 151-155 (5 pages). Some pigments used in printing inks have a sufficiently high water solubility that they "bleed" when exposed to atmospheres of high humidity. Under these conditions, halftones printed with them will change color and when the printed picture is a color proof, it may be impossible for the printer to "match" it. A test has been developed which permits the estimation of the degree of "bleed" for any printing ink. It is made by printing a light halftone (5%) on the paper selected for the printed job, exposing this sheet to an atmosphere of 100% relative humidity at room temperature for 16 hours. Bleeding is indicated by a deepening of the color. The color change is measured by instrument. TAGA Proceedings may be obtained as stated above.

GLASS FIBER PAPERS. R. B. Hobbs. *Ibid., pages* 104-110 (7 pages). Some of the problems encountered in the development by the National Bureau of Standards of a paper made entirely of glass fibers are discussed, and the present process of making such paper on a Fourdrinier paper machine is described. Characteristic physical and other properties of the paper are mentioned, and its present commercial uses are listed. The possible use of glass fiber paper for printing, writing, and records is considered. Its advantages and disadvantages for such use are discussed, and the kind of research that would need to be done is indicated. TAGA Proceedings may be obtained as stated above.

*LABORATORY INVESTIGATIONS CONCERNING THE SUITABILITY OF SEVERAL INSTRUMENTS FOR THE RAPID MEASUREMENT OF THE MOISTURE CONTENT OF PAPER. Walter Brecht and Ludwig Körner. *Das Papier* 8, Nos. 14/14, July, 1954, pages 247-258; Nos. 19/20, October, 1954, pages 419-430 (in German, English and French summaries). The operating principles and construction data of four moisture testers for paper are described in detail in a study which is based on a doctoral dissertation of Darmstadt. Three of the instruments measure the electric resistance (Textometer of Mahlo-Saal, the moisture meter of Mundinger, Renningen, and the Hart moisture meter, New York); the fourth of them, the Hygrotester built by Paul Lippke, Neuwied measures the dielectric constant. In all cases single test sheets were used in place of the running paper web; all measurements were checked against data obtained by the standard method with balance and drying oven. When extreme care is taken to avoid moisture changes in the samples during handling (i.e., between sample taking and first and second weighing), the accuracy of the standard method was found to be ± 0.2%. The present results obtained with the four instruments indicate that all of them are suitable for the intended purpose and, provided special precautions are taken in each case, will give satisfactory values. The accuracy of all instruments (for samples which differ

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in moisture content only) is about the same, i.e., ± 0.3-0.4%. Whereas 10 parallel moisture determinations with the standard method require several hours, the instruments will give results within one to three minutes. However, consideration must be given to the fact that all instrument data are also influenced by other paper properties. The results of the electrical-resistance instruments will vary with furnish, fillers, and electrolyte content of the papers, whereas amount of lignin present, type of furnish, beating degree, density of sheet, an amount of filler will exert an influence during the dielectric measurements. The deviations in the latter case are somewhat less than in the former; however, satisfactory results can be obtained with either method only when the decisive characteristics of the paper to be tested are known and appropriate calibrations are applied. 3 tables, 38 figures, and 37 footnotes. *Bulletin of the Institute of Paper Chemistry* 25 No. 3, November, 1954, pages 216-217. Das Papier is published by Eduard Roether Verlag, Liebigstrasse 24, Darmstadt, Germany.

Lithography—General

EMULSIFICATION. *Modern Lithographer and Offset Printer* 50, No. 8, August, 1954, pages 13 and 26 (2 pages). A summary of a PATRA report on the effects of fountain water on print quality in lithography. The report concludes that the presence of surface moisture on the ink is of greater significance in causing the deterioration of the appearance of the print than the presence of emulsified water in the ink. In their experiments, the combined effect of surface and emulsified water caused the greatest deterioration of print quality.

DEVELOPMENT OF NONCIRCULAR GEARS IN THE PRINTING INDUSTRY. A. A. Hess. *TAGA Proceedings*, Sixth Annual Technical Meeting, 1954, pages 122-129 (8 pages). The applications considered in this paper are drawn from the field of proven printing machinery enjoying a reputation of satisfactory performance over a period of years. The specific items considered are sheeters, sheet slow down mechanisms, sheet transfers, and flat bed press drives. Comparisons are made between noncircular gear mechanisms and more conventional devices used to achieve analogous results. From these comparisons an insight can be gained as to when noncircular gears can be profitably employed. The technical aspect of noncircular gear design and production is considered only to a limited extent since this subject has authors. TAGA Proceedings may be purchased for five dollars each from the Secretary, George S. Hammer, Forbes Lithograph Mfg. Co., P. O. Box 513, Boston, Massachusetts.

BETTER PRINT TRANSFER. H. J. Seel. *Share Your Knowledge Review* 36, No. 3, December, 1954, pages 18-24 (7 pages). Most offset presses print from bearers. The advantages are simplification of operation and maintenance and better control of ink transfer. With bearers the gear teeth are in proper contact at the pitch line. Backlash gear adjustment never needs to be changed. Without bearers the distance between cylinders can change and backlash requires adjustments. Bearing wear is more troublesome without bearers. Cylinder deflection is constant when printing from bearers. Without bearers, cylinder shafts bend slightly during the impression and straighten out in the gap. Without bearers, meeting of the cylinders after the gaps disturbs the impression and may reduce quality.

LITHURE PLATES MAY LEAD TO DIRECT LITHO PRINTING. *Canadian Printer and Publisher* 63, No. 12, December, 1954, pages 43 and 64 (2 pages). This article discusses the advantages and disadvantages of Lithure plates. It states that bimetal plates may make possible a trend from offset to direct lithography.

PHOTOLITHO NOTES. J. S. Mertle. *National Lithographer* 61, No. 8, August, 1954, pages 40-41 (2 pages). Brief notes on recent and past developments of interest to the graphic arts. Included are a new electro-optical device developed at National Bureau of Standards for obtaining "sharp" prints from fuzzy negatives, color proving techniques, bimetallic plates, watercolors, casein sensitizers, bichromated colloids, and mechanical development of albumin plates.

THE FINAL STEPS OF MAKE-READY AND THE WASH-UP. C. W. Latham. *American Printer* 135, No. 12, December, 1954, pages 38-39, 70, 72 and 74 (5 pages).

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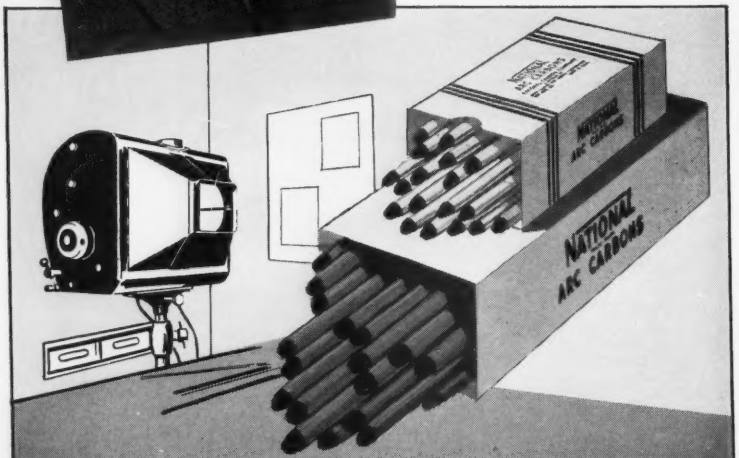

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This is one of a series of articles on makeready and explains the final steps of makeready and wash-up at the end of run or end of day. The part on makeready tells of getting the final lay and color okay. The use of too few waste sheets and the continued use of the ink knife during a makeready gives a sloppy job. Wash-up as makeready is a necessary down time on a press. The cost of wash-up may be cut by putting on a night wash-up crew and allowing the press to run right to quitting time. Wash-up may be done with kerosene if the job is to continue on the same color or if a color change is to be made, the new three-solution wash-up may be used. The washing of dampeners does not hold up press time, for most presses have two sets. They may be washed with detergent or special cleaning solutions may be used.

Graphic Arts—General

A Rapid Engraving Process. D. L. Goffredo. *TAGA Proceedings,* Sixth Annual Technical Meeting, 1954, pages 156-170 (15 pages). This report covers an unconventional means of engraving. The objective was to eliminate the "powdering" process. "Powdering" accounts for most of the time involved in the etching process. Eliminating the necessity of powdering would greatly shorten the time required to etch a plate. This process will etch a 65-line screen to a depth of 0.005" in less than 10 minutes. The engraving metal used in this process is copper plated zinc. The copper is stripped from the open areas to give a copper relief plate. The exposed zinc is spray etched with a copper sulphate solution and the sides of the relief are automatically "powdered" by galvanic precipitation from the etchant. This process is still in a laboratory curiosity stage. Refinements are necessary before it can be considered practical. TAGA Proceedings may be purchased for five dollars each from the Secretary, George S. Hammer, Forbes Lithograph Mfg. Co., P. O. Box 513, Boston Massachusetts.

*One-Bite Etching Process. *Inland Printer* 134, No. 3. December, 1954, page 64. Zinc-coated magnesium plates, a special etching solution, and a new etching machine form the basis for a new engraving process developed by Acme Telectronix Division of NEA Service, Inc., 1200 West Third Street, Cleveland 13, Ohio, and introduced at the recent convention of the American Photoengravers Association in St. Louis. The plates used in the process have a thin coating of zinc over a magnesium base, and the combination is said to include the advantages of both metals. The plate is exposed in the conventional manner with standard equipment. After exposure, a scumming bath is employed to remove the thin coating of zinc from the unexposed areas, and the plate is then placed in the Acme etching machine where it is sprayed with the special etchant, which builds its own resist on the side walls of lines or dots in the plate. The etching operations takes six to eight minutes for halftones and 15 to 20 minutes for line work or combination plates.

Three-D Pictures Without Glasses. Tom Cameron. *Pacific Printer Publisher and Lithographer* 91, No. 3, March, 1954, page 11. The possibility of producing stereoscopic images on flat paper which may be viewed without glasses or other special optical equipment was announced by Paul A. Hesse and Harvey Prever. The process is based on the Bonnet and Butement ssytems. Essence of the process is a simplified process for taking multiple-image photographs through a lenticular screen placed over a film or plate. They are now working to produce the viewing screen by press impression rather than applying it by hand.

Printing Line vs. Bearer Height. B. L. Sites. *Share Your Knowledge Review* 36, No. 3, December, 1954, pages 34-37 (4 pages). A discussion of bearer height in relation to form height on flatbed letterpress machines. It is claimed that true rolling contact between form and paper when the pressure squeeze is .003-.004" is obtained when the bed bearer height is .010 to .015" below the form height.

Self-Luminous Halftones. F. A. Schwertz, M. N. Haller and J. J. Mazenko. *Journal of the Optical Society of America* 44, No. 9, September, 1954, pages 745-746 (2 pages). The phenomena

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of electroluminescence and xerography have been combined in a way which permits the production of self-luminous halftones. In brief, the distribution-in-density of a layer of electroluminescent phosphor powder is controlled by the xerographic technique, and the powder is caused to luminesce by subjecting it to the action of an alternating electrical field. In preparing a self-luminous halftone, a sheet of NESA glass is first dip coated with a clear thermoplastic resin. The phosphor-powder pattern is then formed on a selenium plate by ordinary xerographic procedures, the distribution-in-surface density of the powder being controlled with the aid of a screened positive photo-transparency of the halftone subject. The plastic-coated NESA glass is then placed, conducting face down, on the selenium plate, and the phosphor pattern is transferred to the plastic coating by means of electrostatic forces which are produced by corona charging the faceup side of the glass sheet. The phosphor powder is then "fixed" by bringing the plastic coating up to its softening point and holding it there for several minutes. Finally, an aluminum electrode is vacuum evaporated over the phosphor layer. The halftone is then made to luminesce by applying an alternating voltage between the transparent conductive layer and the aluminum electrode.★

PRINTING WEEK

(*Continued from Page* 49)

York Employing Printing Association in the Bowman Room of the Biltmore Hotel.

Estimated quantity of the 1955 Official Printing Week Stamps used was set at a minimum of 10 million stamps. Well over 250,000 posters, proclamations, etc., were printed and displayed. A minimum of 30,000 Printing Week bumper strips were carried up and down the streets and highways of the nation and thousands of blotters, bookmarks, and direct mail pieces were also produced in the promotion effort.

The 1955 celebration also set a record in the number of new contests designed to create interest in local observances. Joining Warner Bros.' Dorothy Malone as "Miss Printing Week" were at least a dozen local Printing Week Queens. In some cities, contests for the local outstanding printer or Craftsman were held. In other cities, high school student essay, and art and design contests were held.★

NAPL TRIP

Continued from Page 45)

was scheduled to cover 7,500 miles and was termed highly successful by Walter E. Soderstrom, NAPL executive vice president. Mr. Turner, who returned early to the association's New York office, said the trip was a fascinating experience.

"We flew as low as 300 feet over the desert," he stated, "then soared to 8,000 feet in crossing the mountains. It was a wonderful way to see the country."★

•

Cleveland Host to R. E. Council

Executive Committee of the Research and Engineering Council, Graphic Arts Industry, Inc., will hold their regular monthly meeting Feb. 10, at Hotel Carter, Cleveland. John H. Davis, Jr., president, said the meeting will begin at 10 a.m.

COLLOTYPE

(*Continued from Page* 64)

but do not possess the high mechanical strength and gelling properties of gelatin.

Other Colloids

However, despite the overwhelming advantages of gelatin, it is by no means the only colloid that could be used. Synthetic high polymers have been suggested, such as polyvinyl alcohol, polyacrylamide, polyvinylpyrrolidone, and many others alone and in mixtures. While these synthetic polymers do have certain advantages over gelatin, they can not replace gelatin until they are superior not only in one but in all the requirements for a good Collotype coating. Such a synthetic colloid will, therefore, have to be "tailormade" to combine in one product all the advantages over gelatin.

The choice of Bichromate as the sensitizer has also been one of expediency. While the bichromate is highly satisfactory from the standpoint of image-formation and characteristic curve, it is low in quantum yield, or as the photographer would put it: slow in speed. It has recently been reported (Oster, Photo-Chemistry of Dyes in Solution, Photogr. Eng. 4, 173) that certain water soluble vinyl monomers can be polymerized by light and the quantum yield is of the order of one million as compared, for example, to the conventional silver halide system which has a quantum yield of less than one. Of course, with silver halide the action of development serves to intensify the image so that the quantum yield is increased many millions of times. It would be highly desirable to have the speed of a silver sensitized material and we have accumulated sufficient evidence to show that a silver halide, pre-sensitized plate is indeed a possibility.

Although gelatin may not be the ideal ingredient it is nevertheless a material which can be modified over an exceedingly wide range of conditions. Consider for a moment the paradoxical requirements of a Collotype plate. It must be sufficiently soft to absorb large amounts of moisture. The degree of swelling is, of course, dictated by the exposure in image areas where crosslinking takes place under the influence of light. Highlights and non-image areas or pure whites must swell and accept maximum moisture to repel all ink and print as whites. At the same time, these areas—highlights and whites—must have high mechanical strength. But gelatin in a swollen state exhibits the least strength and therein was the problem.

Fortunately, there are an exceedingly large number of humectants and tanning agents for gelatin and by combining these crosslinking chemicals we were able to establish a balance to circumvent to a large degree this so-called paradox. Our plate coating today is exceptionally tough and yet its swelling properties have not suffered—a condition which we formerly considered impossible to obtain. The result, therefore, is a plate that is capable of long runs without sacrificing quality.

The conditions under which our plates were made and the particular methods employed for making these tests are as follows:

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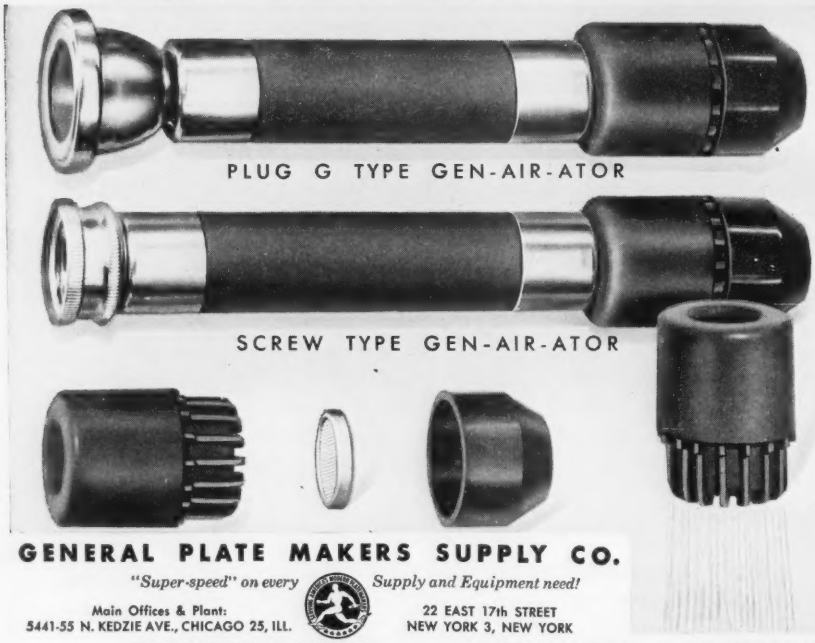

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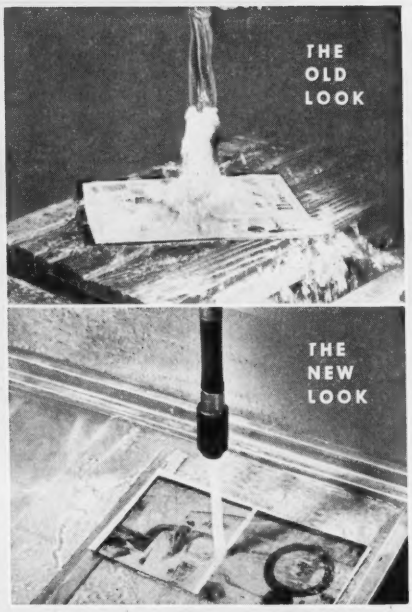

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bled with widely differing gradient characteristics. In this case we used aerial negatives supplied by the Army —some were low altitude, well exposed shots while others were taken under poor lighting conditions at higher altitudes and exhibiting the usual faults in aerial negatives. The negatives chosen were printed by direct rotary Collotype—by offset Collotype—and by 300 line conventional offset.

The direct rotary prints represented the best we could hope to attain—and the 300 line conventional offset prints became the lowest limit of quality which we would have to surpass. By making these comparisons we established a frame of reference in which to operate.

The water fountain, it must be pointed out, is never used in offset Collotype. The colloid of the plate acts as a reservoir by taking moisture from the air. To maintain this moisture balance it is necessary to control the humidity in the pressroom. The usual procedure in direct rotary Collotype is to stop the press every five or six hundred sheets and sponge the plate with Glycerine and water. On an offset press that is running at a speed of 5000 an hour this would mean stopping the press for dampening every eight minutes which would be out of the question from a practical standpoint. So a way had to be found which would slow down the moisture exchange between the plate and the surrounding air. The blanket is also a source of moisture loss but we never had time to study that particular phase although it would certainly be worthwhile.

Replacing Glycerine

The plate we have today will run about three to four thousand prints before dampening becomes necessary with the glycerine and water solution. It doesn't seem to matter much any more whether you run the press at 3000 per hour or 5000 per hour—if you want to maintain uniformly high quality you must replace the glycerine in the plate about every 3500 sheets.

Another point which might be worth mentioning is the kind of negative most suited to the process. Fortunately it is a very low contrast negative and in high speed altitude aerial photography that's about all you get most of the time. A density range between .8 and .9 with the shadow step around 0.25 to 0.30 and the highlights about 1.10 to 1.20 maximum. Regardless of the density range the over-all density can not be too heavy. Otherwise exposures become too high with the result that shadows get too deep and it will be almost impossible to wash out the bichromate from those areas. If the bichromate sensitizer does not wash out, the shadows will continue to harden and by the time the plate goes on the press, the shadow areas will be clogged and will not press out properly. This is the chief danger in long exposures.

We do have a large degree of control on the press. By raising the moisture in the room you increase contrast and vice versa. An area which is somewhat underexposed and prints too light can be brought up locally by the use of tanning agents such as tannic acid and alcohol The same is true for clogged up shadows. By applying ammonia or sodium sulphite, the shadow can be opened up quite easily. To get rid of a tint or even a mistake such as a break-through on the mask, a weak solution of triethanolamine is enough to correct it.

Collotype Ink

One other factor which should be considered is the ink used in Collotype. As a rule, the stiffer the ink the greater the contrast in the print while the softer the ink the more tone and gradation will be obtained. However, the chemical composition of the ink vehicle will have as much bearing on printing quality as the physical characteristics. And this phenomenon was demonstrated conclusively in the course of this investigation.

Some mention was previously made of experiments with a silver halide pre-sensitized plate. Coating a silver emulsion on aluminum we considered impractical. Unless the surface of the aluminum is made chemically inert the silver emulsion will develop spots and fog. Since photographic manufacturers are geared to coat sensitized goods on a web we felt that a plastic material that can be made in rolls would be more suitable as a support. Film base, even the topographic variety, is not dimensionally stable enough to withstand the high moisture and glycerine to which the plate is subjected. Although we printed quite successfully from a Vinyl support the plate very often shattered in the press if there was the slightest nick on any of the edges.

Brittleness of the vinyl could be overcome by plasticizers but that only introduced other obstacles such as elasticity under stress and "cold flow". It is hard enough to get good register in printing without having the plate stretch while the press is running. We finally licked the problem by using a laminate that stood up remarkably well. By sandwiching a pre-treated glass cloth between the two sheets of polyvinyl chloride we produced a support that was dimensionally stable, had excellent moisture resistance, and was chemically inert to the emulsion. It was not brittle and could resist enormous stress of the plate clamps without shattering.

Conclusion

In conclusion, I should like to say that despite our early misgivings and doubts concerning the feasibility of a 10,000 run with offset Collotype we did manage to go far beyond that figure. I have sheets that were taken after a 25,000 run without any appreciable loss in quality. Our small contribution has been to correlate our observations based on long experience with Collotype and evolve an arrangement of plate formula and press technique that has proven to be superior to anything we have been accustomed to in the past. But what is more revealing is that although we have only scratched the surface, there are enough signs to point the way toward making Offset Collotype a *practical* method for printing in continuous-tone.

The present plans are for the Map Reproduction Branch of the Engineer Research and Development Laboratories to evaluate this process now to determine its feasibility for military map reproduction.★

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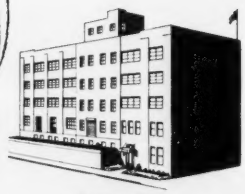

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222 West Adams St., Room 429
Chicago 6, Ill.

CONTROLLING COSTS

(*Continued from Page 53*)

been highly encouraging. A detailed budget of these costs is prepared for each center, item by item. Items such as: repair parts, machine maintenance, tympan, make-ready paste, sharpening cutter knives, chemicals, roller maintenance, etc. Monthly we report to each center foreman his actual costs—item by item—for the month and year-to-date totals as compared with budget.

Important Expenses

Let's look for a minute at these direct departmental expenses and supplies. Here is a category of expense that cannot be brushed aside lightly. According to recent P.I.A. ratio studies, these costs have averaged in the industry 2.4 per cent of sales. On 1½ million sales, this amounts to $36,000. Our ratio to sales for this item in 1949 and 1950 was 3.4 per cent. Last year, this ratio was 2.0 per cent and thru July of this year was 2.3 per cent. This reduction was achieved despite the fact that most of our equipment is now nearly five years older than it was in 1949 and in our case, machine repairs and maintenance costs are a large portion of the direct departmental expenses account.

This account—direct departmental expenses and supplies—I have found to be a tricky, deceitful little character. In reviewing your monthly operating statement you note that your direct departmental expenses have averaged $4,000 a month for the past three months, which is 2.6 per cent of sales. Not bad, you say. You go a step further and observe the $4,000 broken down by cost centers. Based on the activity in the centers, you decide the total costs look o.k. But start looking at the center costs item by item and the gremlins start leaping—190 gallons of type wash—it's impossible! A $15 Repair Part for Press 12 but a $130 machinists' bill, etc. One questionable charge leads to another.

Suddenly you become aware of the fact that your purchasing procedures for this type of expense are something less than perfection. Your purchasing set-up is built around a clerk who simply receives requisitions from your foreman and starts shopping — whatever they want in whatever quantities and from whom. After all, old foreman Jackson has been with us for 25 years and if he wants AAA-4 Type Wash, he knows what he has to have. If Press 12 is on the blink who can do a better job than Jackson's son-in-law whom everyone knows is the best machinist in town?

For the first time in years you question Jackson about his use of 190 gallons of type wash in April. Jackson feels the 190 gallons is about average and can't understand what the office is concerned about. When you explain that $237 for type wash appears to be way out of proportion to its function, Jackson wants to know how the office morons arrived at $237. And finally it's out—the stuff costs $1.25 a gallon. Jackson, your best foreman, you find had an idea the stuff was about the same as kerosene, 20 cents or 25 cents a gallon. He further admitted his boys had been slushing it around for years. By July a satisfactory substitute has been found at a considerably lower cost and you are no longer slushing it around like water. Instead of $237 your July cost is around $54.

If you gain nothing more, a budget—because its preparation and analysis forces you into detailed break-downs of costs—will point up weaknesses in your procedures and a sloppiness that just couldn't exist in your plant.

Too Much Soap

Another example. You had convinced yourselves over the years that you simply were not large enough to warrant the setting up of a storeroom for miscellaneous supplies and anyway you didn't have the space for such luxuries. When you get into your budgetary details you find you have been purchasing five cases (720 bars) of Lux soap a year. Why? The factory rest rooms use a powdered soap. The only apparent answer is that the office personnel have delicate skins and judging from the quantity purchased, quite a few babies.

I'm sure this couldn't be your plant because, in the first place, your employes are honest and, secondly, your procedures and controls are too tight to permit such goings on. And anyway, why get excited about a few bars of soap? The danger, as I see it, lies in the psychological effect on the employees. Of course, your people are honest and even if they were not how much type metal, paper, etc. could they haul away from your well-protected plant? The point is, if the feeling exists that the company is "loaded" and has for years had no particular interest in a bar of soap here and a bulb or two there—what must be their mental approach to the use of valuable time and materials? It seems to me it could only be a reckless "the company doesn't care, why should I" attitude. "Don't bother to count the paper, Mac, guess at it—what's a couple hundred sheets here or there."

No accounting system or controls method should tie itself in knots with bars of soap and light bulbs. But our experience has proved that a loose control over such items over a period of time results in a permeation of the entire organization with a "don't care" attitude. If from $200 to $2,000 has been dissipated in a couple dozen items of the soap and light bulb variety, try to imagine what logically could have also happened to ½ million in wages and $200,000 in paper.

Obviously, most of our time is spent in the control of wages and materials, but we have found that to go out occasionally in left field and pick on small items has a very salutary effect—as a stripping foreman of ours said recently when questioned about his drawing from supplies on two consecutive days a package of 100 industrial razor blades—"You boys are watching the pennies as closely as the dollars, aren't you?" That knowledge is steadily spreading down through our foremen, through the men right down to our porters. The resulting effect is a keen sense of appreciation of costs and an awareness of management's interest in every small segment of those costs.★

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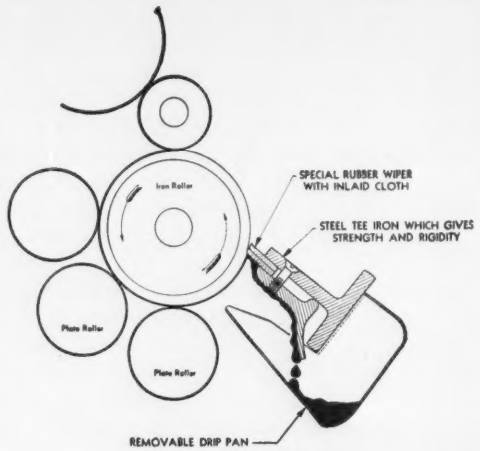

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VIGNETTES

(*Continued from Page* 36)

nette produced with a 9½ inch light-to-film distance and a 10 minutes exposure is about 11 inches long.

The chart that follows will give an approximation of the light-to-film distances and exposures required for various width vignettes.

Lamp-Film Distance In Inches	Exposure Sec. (15 W. Fluor. Tube)	Vignette Length In Inches
1½	30	1
2½	60	2½
3½	90	4
4½	132	5
5½	197	6
6½	275	7
7½	366	8
8½	470	9
9½	**588**	**10**

This method should be used to make rectangular, vignetted, tint blocks. Also, it is probably better than the pin hole method to make gray scales. Strips cut from the rectangular vignette will not have the circular effect produced by the round pinhole.

Other Variations

LTF also checked the effect of other shapes of apertures—squares, rectangles, stars, ovals, etc. These don't seem to offer much. The final vignettes always approximated circular and straight line patterns.

You can change the length of the vignettes by using yellow or blue filters, or an orange instead of a magenta contact screen.

Also, on some of the short vignettes, the tone values in the 40-60 per cent range appear to break sharply and look like lines in a target. These can be blended by a fast on-off flash exposure.

If you don't have a contact screen you still can use this method to produce a vignette with an even fall-off. In this case, use the same set-up without the contact screen. This will produce a continuous tone vignette. You then use this as copy and make a halftone of it with the glass screen in the camera in the usual way. Your exposure for continuous tone vignettes naturally will be considerably shorter than those when using the contact screen.

Why the Equipment Works

Figure 2 shows the principle behind this method of making vignettes. It depends on the fall-off of light intensity as the rays get farther and farther from the vertical.

For the most part, the decrease in light intensity at point B compared with point A is due to the operation of the well-known law of inverse squares. (The intensity of light is inversely proportional to the square of the distance from the source.) This is particularly true of the rays that are closest to being perpendicular.

As you get farther and farther away from the perpendicular, other factors get into the picture. At wide angles these factors decrease the effective light even more than the effect of inverse squares. (To compute their effect, it is necessary to use the cosine^4 law.)

One of the factors is that the image of the circular pin hole when it is projected at an angle becomes an elipse. The area of this elipse (when compared to the area of the image of the pin hole on the perpendicular) becomes smaller and smaller the farther it gets from the perpendicular. Another effect that has to be considered is that the effective intensity of a ray of light striking the film at an angle is less than that of a perpendicular ray because it tends to be reflected off the surface of the film. These are not all of the factors involved, but they are the most important ones.

The following chart will give you an idea of how the light falls off.

Angle Away from Vertical	Relative Light Intensity in Foot Candles	% Light Lost
0°	1.000	..
5°	.984	2.6
10°	.941	5.9
15°	.870	13.0
20°	.780	22.0
25°	.675	32.5
40°	.344	65.6
60°	.062	93.8

Irregular Shapes

Production of halftone vignettes of irregular shapes like buildings, heads, logotypes, machinery, etc., by photographic methods is not too practical.

After many experiments using silhouettes and both pin-point and broad light sources, LTF was finally able to produce some vignettes that might be considered "fair." However, the procedure required six steps and four pieces of film. Hard edges showed where the vignette joined the halftone, and the vignettes themselves had to have minimum lengths of two to three inches.

For these reasons, LTF still believes that the most practical way to do this type of work is on the original art.★

PHOTO CLINIC

(*Continued from Page* 50)

sible to locate and re-position glass plates with extreme accuracy. Such a device is used for color-composing, masking and combining multiple images. When used for color-correction masking a register frame permits unlimited variations in masking technique and eliminates manual registration of component images. Space does not permit a detailed account of the many ways in which 3-point register devices may be advantageously employed.

Q: Does pre-separated art work completely eliminate retouching and dot-etching in color reproduction?—S. G. G., Chicago.

A: No, not entirely. The amount of corrective work necessary, however, depends upon the accuracy with which the art work is prepared and the accuracy with which such artwork is translated into photographic images. One such system (Bourges) involves the use of colored overlays which are photographed separately and are then combined to serve as a color guide. The process has been in use for some time and users report that retouching is at a minimum. This writer has seen many excellent reproductions from Bourges copy for which it was claimed no retouching was required.★

ATF Displays Types

With interest high in expanded and script faces, American Type Founders has issued a booklet displaying several of its new fonts of type in these categories. The booklet, available from the company at 200 Elmora Ave., Elizabeth, N. J., shows the ATF faces, Brody, Dom Bold, Franklin Gothic Wide, Steelplate Gothic Bold and Troyer Zodions, in various sizes, roman and some italic.

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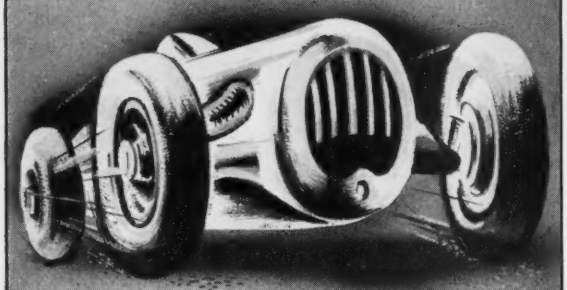

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PLATEMAKING

(*Continued from Page* 35)

in making plates, LTF suggests that you add steps in the order in which they are listed in the right hand column. Don't try more than one new thing at a time.

Once you get a new step into satisfactory operation and know what it will do and won't do, then try the next new addition. If you start more than one new step and run into some kind of trouble, it's very hard to know what caused it. If this happens, a natural tendency is to throw out everything new and you stay in the same old rut. So, make haste slowly. Don't try to do everything at once. Never omit any step listed as part of the basic plate except as noted above.

(This article is from LTF's Bulletin 805, *"How to Make and Run Better Zinc Surface Plates."*)

ORGANIC COATINGS

(*Continued from Page* 59)

usage sufficient to ultimately lower their cost.

Alkyd-Polyester Resins

The alkyd-polyester resins have also been modified with various urea and melamine resins. These formulations result in litho coatings which show excellent adhesion to various plate surfaces, particularly to the matte tinplate used so extensively in the crown field. This type coating shows good resistance to the alkali-pasteurization test of 600 p.p.m. of NoOH in water.

In general, it appears that whenever is it possible to obtain chemical reaction and subsequent cross linking, adhesion over various plate surfaces is improved and sensitivity to variation in plate surface conditions seems to be decreased.

It can be seen that many of the developments in the past few years, in the metal litho coating field, have been directed toward the philosophy of cross linkage with its resultant improvement in film properties. It might be postulated that the cross linking in some manner aids the transfer of free electrons from the metal into the coating, thereby increasing the electrical energy of adhesion at the coating-metal interface.

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•

Utah Printers Hold Convention

Third Annual Graphic Arts convention was held Jan. 13-15 at the Newhouse Hotel, Salt Lake City, sponsored by the Printing Industry of Utah. The Honorable Raymond Blattenberger, public printer, addressed a combined audience of convention delegates. Allied Printing Trades Council, Craftsmen's club, Utah State Press Assoc., and the Advertising club of Salt Lake City at the industry dinner, Jan. 13.

Some of the topics covered in the three-day session were: "Producing the Modern Electrotype", Keith Kidd, Deseret News Press; "The Great White Trackway", Zellerbach Paper Co.; "Paper Work", Carpenter Paper Co.; "Proper Stock Selection—Satisfied Customers", Joe Moslander, Dixon and Co.; "Matching Your Colors", LeRoy Winter, California Ink Co.

•

Litho Teacher Dies

Michael B. Lohmaier, a lithography teacher for 25 years at Edison Technical and Industrial High School, Rochester, N. Y., died Jan. 11. He formerly was associated with the Rochester Lithography Co.

•

Foundation Buys Standard

Standard Publishing Co., Cincinnati, publisher of religious periodicals and books, has been sold to recently-incorporated Publishing Foundation of Cincinnati. Sale price was reported to have been approximately $4 million. Founded in 1866, Standard lithographs church and Sunday school supplies, visual aids and lesson helps. The firm has 400 employees.

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We always have (always will) sit in our customer's chair . . . furnishing the biggest dollar value . . . because we realize it is the Graphic Arts Industry's appreciation of our double-dollar value that keeps our factory force capacity-busy . . . every day . . . of every year . . . and their continuous orders enabled us to keep our prices close to pre-war, instead of having doubled or more than doubled like other printing machinery.

Always have had FAITH UNlimited . . . we are sure 1955 will be the Graphic Arts Industry's biggest year and "Gold-Mine" BAUMFOLDERS will help a lot in making it their most *profitable* year.

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DRY OFFSET

(*Continued from Page 44*)

his bath. Only under these conditions have optimum results been consistently obtained.

Etching is the most important step in the process: thus a high degree of skill and artistic sense must be employed.

From the foregoing, it will be recognized that only standard techniques have been employed. There are no mysteries attached to the process and a photoengraver and printer who are willing to apply themselves without prejudice can obtain results which will compare favorably or even surpass the end results obtained from average commercial offset and letterpress jobs.

Advantages of Process

Dry offset has some distinct printing process advantages, namely:

Stronger color, greater paper selection, smoother ink lay, no chemical process variables, photoengraving with shallow depths, storage and handling advantages, greater press speeds, longer runs, use of a dual machine, wet and dry, combination plate printing, simplified press operation, less ink consumption and use of standard equipment and supplies.

It appears that the future holds many more improvements for this process. The future of dry offset is now in the hands of those who have the "skill and know how." Thus the task of commercial advancement and acceptance of the process is up to those who are interested in the progress of the graphic arts industry.★

ECONOMY INKS

(*Continued from Page 40*)

component inks used and to write a formula in the event the original mixture is not sufficient to complete the entire job, but he has relieved himself of all of the foregoing doubts. He has no delivery worry. He has no worry concerning match. He has not expended money for useless ink to be placed on his shelf and forgotten.

Conversely, let us take another example. Assume the job is a large one, which will require a considerable amount of ink. The same method would be used; a small batch prepared in the pressroom and a formula retained. All that is required, then, is a telephone call to the ink supplier telling him the amount desired and the formula used. Here again delivery is expedited, since the matching is eliminated and, from the prices of the stock inks, the price of the total batch can very nearly be determined. This can be extremely helpful in the estimating of a short-profit job.

What is necessary, then, in order to install this stock ink method of operation?

1. A feeling of confidence in your ink supplier — the knowledge that he makes proved lithographic inks which you know can be run trouble-free.

2. A small inexpensive scale on which to weigh component inks.

3. A supply of approximately 12 good stock inks. Two yellows, an orange, three reds, three blues, an opaque white, a transparent white and a neutral black as well as the necessary varnishes and driers.

It is not necessary to stock these in large quantities. The suggestion here is that five pounds of each usually is sufficient. Here again your ink supplier can be helpful in suggesting the proper shades and types of ink to be used.

4. And very important, the instructive assistance of your inkmaker who, in most cases, will send a technical man into your shop to instruct your pressmen as to the proper methods of blending colors as well as the different uses of varnishes and driers necessary to printing on various types and kinds of stock.

Instruction of this nature has, by past experience, been ample to take care of 90 per cent of the jobs involved. Exceptional jobs involving peculiar stock or unique ink formulations should always, of course, be forwarded to your inkmaker for a more advanced formulation, but these

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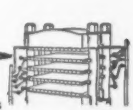

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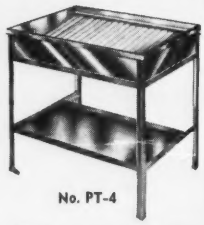

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Sturdy gauge, high-lustre satin finish, Type 316 Stainless Steel. Complete with stand, perforated spraypipe — full length of trough. 1½" stainless steel standpipe. Steel storage shelf with front and back stop. Lattice drain rack of kiln dried wood, smooth rounded corners.

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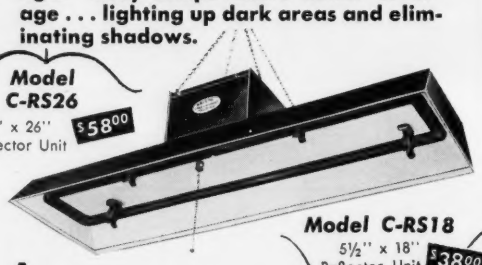
FOR THE GRAPHIC ARTS

MORE **SAFE** LIGHT- **LESS** EYE STRAIN

ARISTO COLD LIGHT Safelight Units, because of the elongated design and "cold light" Ruby lamps insure better coverage . . . lighting up dark areas and eliminating shadows.

Model C-RS26
9" x 26" Reflector Unit $58.00



Model C-RS18
5½" x 18" Reflector Unit $38.00

Aristo **COLD LIGHT Safelights are designed for ceiling suspension. They are simple to install. The units are sturdily built, and finished in attractive gray metal crinkle.**

Both models are equipped with the ARISTO Ruby Cold Light Lamp. For Free Literature, write

Aristo Dept. L-52 **ARISTO GRID LAMP PRODUCTS INC.**
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cases are the exception rather than the rule.

5. The careful use of clean ink knives and skin papers to prolong the life and true shade of the stock inks.

It is not the intention here to relieve the inkmaker of any of his duties or responsibilities, because most certainly his job is the formulation of efficient, workable printing inks and the matching of colors. However, with an eye toward a more economical and time-saving method of operation in the small lithographic shop, the installation of the stock ink systems is definitely one to be considered.★

WINE IN CANS

(*Continued from Page* 55)

cans are very light — about one-third the weight of the nearest corresponding size of glass bottle, according to association executives. The consumer price also is attractive — 33 cents a can.

For the time being distribution will be limited to California but market coverage will be extended to other areas as soon as practicable.

Yosemite Valley Association is a non-profit farmers' co-operative producing and marketing organization formed under the Agricultural Marketing Laws of the State of California. Carl W. McCollister, former chairman of the Madera County Board of Supervisors, is the president and board chairman — offices occupied since Yosemite Winery's founding in 1946.

Largest Winery

The Winery owns and operates wineries at Madera, and at Fowler, Fresno County, California. It claims to be the largest independently-operated winery co-operative in California. Production is of appetizer and dessert wines exclusively. Yosemite wines are distributed and sold (in glass) in many areas of the country, including Pennsylvania, New York, Wisconsin, Texas, Arizona, New Mexico and Oregon. The winery supplies bulk wines for bottling and sale under customers' labels—several of them nationally-advertised brands. The brand name Carina ("little sweetheart") has been used by Yosemite for a number of years. It is the winery's intention to continue to package Carina wines, as well as its several other brands, in glass bottles as well as in cans.★

OVERPRINTING

(*Continued from Page* 33)

overprinted, the print and original artwork are virtually identical.

Basic Facts

These basic facts plus hundreds of technical details in the application of the overprinting principle form the basis of the text of *Color by Overprinting*. Although many of these facts are known, and although the basic idea itself is far from new, general knowledge of the subject is still limited throughout the trade. For this reason the book may be of use to lithographers, printers, artists, advertising agencies, publishers, etc. An important feature of the book's approach to the subject is the concept that in today's world, most artistic production is in printed form. Therefore, any method of preparing artwork for reproduction should be closely related to printing techniques and principles—as overprinting certainly is.

Ink Research

Much could be written about the special problems involved in the production of the book itself, and perhaps these aspects of *Color by Overprinting* will furnish material for future articles. At present, however, special mention should be made of the ink research by Bensing Brothers & Deeney, whose laboratories have met every demand made upon them for this unique project. Working closely with the lithographer —National Advertising Manufacturing Company of Philadelphia—Bensing Brothers had an opportunity to test the inks on a variety of average-grade papers, which were put through a Harris - Seybold two - color offset press even before any attempt was made to print the prospectus for the book.★

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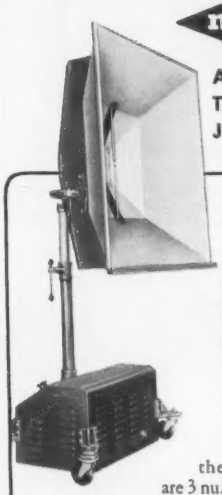

Only nuArc offers so complete a range of fine, modern and efficient Carbon Arc Lamps. Whether you need arc lamps for large camera and printing frame work or smaller equipment, there is a nuArc lamp tailor-made for the purpose. There are 3 nuArc arc lamps from which to choose . . . every-one built to give superior performance.

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Brand new! Better than any other type of dark room light available. Choice of 4 models. Large frame makes inspection of film negatives and positives easy. Red fluorescent lights provide uniform light distribution for accurate viewing.

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No. DL-19F	**Darkroom Light (22" x 19" x 8" deep).**

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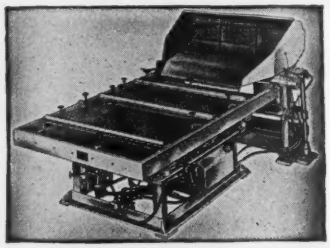

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Address replies to Classified Advertisements with Box Number, care of Modern Lithography, Box 31, Caldwell, N. J.

Help Wanted:

PLATEMAKER, STRIPPER AND CAMERAMAN: For quality two and three color work. Ideal working conditions in modern, air conditioned department. Steady work with overtime. Located in Ohio. Address Box 636, c/o *Modern Lithography.*

A-1 PRESSMAN: For operation of Harris two-color presses. Must be capable handling finest four-color process work. Good opportunity in first-class city in Southwest. Fine working conditions. Permanent job. Give complete details of your experience, previous connections, earning, and references. Reply will be held in strict confidence. Address Box 637, c/o *Modern Lithography.*

BLACK AND WHITE STRIPPER, opaquer in progressive Chicago plant. Address Box 638, c/o *Modern Lithography.*

TOP LIGHT CAMERAMAN—Qualified to produce fine quality color lithography in West Coast plant. Must be familiar with all modern techniques. Give complete details of experience in letter. Personal interviews will be arranged for qualified applicants. Address Box 647, c/o *Modern Lithography.*

NIGHT SUPERINTENDENT for large Southwestern printing concern doing quality color work. Must have knowledge of composing, letterpress, and bindery operations in addition to complete lithographic experience. Salary $10,000-$12,000 per year. Give age and experience in reply. Address Box 644, c/o *Modern Lithography.*

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Production Manager—Offset-Letterpress
Time study, engineering & folding carton experience desirable.
MIDWEST $8,500-10,000

Superintendent—Composing Room
EAST $6,000-7,200

Superintendent—Trade Plate Shop
Photoengraving & Offset
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Foreman—Litho Plate Dept.
Age 32-48 stripping exp. necessary
MIDWEST $8,000-9,400

Foreman—Litho Pressroom
4 color experience necessary $6,500-8,500

Foreman—Composing Room
MIDWEST $6,500-6,800

Office Manager—Controller MIDWEST $5,200

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Situations Wanted:

PLATEMAKER: Age 39, capable of handling finest four color process work in Lithure, Tri-Metal Aller deep etch. Can operate Step-Repeat vacuum frame, roll up. Knowledge of stripping. 15 years experience. Location west or southwest. Address Box 639, c/o *Modern Lithography.*

TECHNICAL SPECIALIST: With outstanding record of achievement as technical advisor. A unique background of practical experience in lithographic production, trouble-shooting and trade-training. Interested in responsible position with progressive plant involving technical supervision and in-plant training. Would also consider commensurate position with supplier or equipment manufacturer. Address Box 640, c/o *Modern Lithography.*

WANTED: A progressive Lithographer who is looking for a technical specialist to assume responsibility for plant improvement in methods, standards and control, with emphasis on color. Box 641, *Modern Lithography.*

LITHOGRAPHIC LETTER ARTIST: Previously foreman for one of the better trade shops in the Midwest. Now free to locate anyplace—preferably in southeastern area. Best references. Address Box 646, c/o *Modern Lithography.*

LITHOGRAPHER, 45 years old, would like to make a change. Have 27 years of experience in high grade plants. Am presently employed as superintendent of large trade shop. Will consider any location. Address Box 645, c/o *Modern Lithography.*

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Buy Surplus printing presses equipment supplies from U. S. Government. Send $1.00 for Government Surplus Bulletin to Surplus Bulletin, Box 213B, East Hartford 8, Conn.

FOR SALE: 33" Zeiss Apo Tessar lens, Gelb & Macbeth 35, 45, 50 and 70 amp. Overhead printing lamps, half of list price. Singer Engineering Co. for complete platemaking equipment, 248 Mulberry St., New York, WAlker 5-7625.

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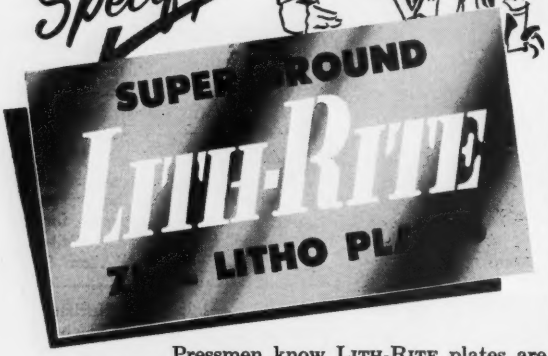

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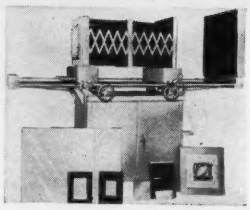

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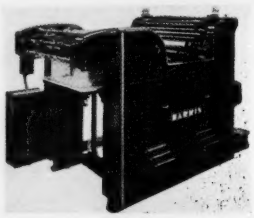

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ONE 37" — 133 line levy halftone screen without holder. Brand new—still in original case. Immediate Delivery. Price . . . $2,315.00. Address General Plate Makers Supply Co., 5441 N. Kedzie Ave., Chicago, Ill. In. 3-2411.

USED ZINC PLATES—size 25½ x 36—for Harris S5L offset press. About 80 plates .013—about 200 plates .014—about 200 plates .015 and 50 plates .016. Make offer to The Dorsey Company, 210 South Poydras Street, Dallas 2, Texas.

Miscellaneous:

WANTED: Used laboratory coater for testing coatings, varnishes and lacquers. Address Box 643, c/o *Modern Lithography.*

COLOR separations for process offset: Halftone positives, negatives made electrically controlled color corrected including dot etching, as low as $99.00 a set, up to 3½ x 5½ size, made in all sizes, proofs available. Color copper cuts for letterpress: Color corrected copper plates including progressive proofs in all sizes up to postcard size for only $99.00—quick service. Send for free samples and price list "4." Moss Photo Service, Inc., 350 West 50th Street, New York 19, N. Y. Serving accounts "to satisfy" from coast to coast since 1935.

Add Presses Upstate N. Y.

Boncraft, Inc., Buffalo, N. Y., recently put in a Harris 21 x 28" offset press. The same model press was installed by Syracuse Lithographing Co., Syracuse, N. Y.

•

Add Equipment in South

Lithoprint Co., Atlanta, recently put in a Seybold 40" cutter, it was announced last month. King Printing Co., Bristol, Tenn. added a Harris 17 x 22" offset press. Two firms in Richmond, Va. also added Harris offset presses. Everett Waddey Co. installed a 35 x 45" press, and Virginia Stationery Co. added a 22 x 34".

Alpha Adds Two-Color

Alpha Lithograph Co., Camden, N. J., recently completed installation of a Harris 35 x 45" two-color offset press.

Printing Management School Sought

Graphic Arts Association of Illinois is working with three major educational institutions in Chicago area to establish a School of Printing Management. Plan is to organize a four-year course leading to an academic degree, according to an announcement made Jan. 19, by Frank J. Bagamery, secretary and general manager of the Association, at the 30th annual business meeting. Interest in the project is being shown by Illinois Insitute of Technology, University of Chicago and Northwestern University.

•

West Coast PIA Seeks Members

Los Angeles PIA has produced a colored, illustrated booklet, "What's In This For Me?" spurring its drive to sign up new members. Booklet lists services of the organization which had 451 member firms as of Jan. 1.

•

N.W. Firm Expands

Trojan Lithograph Corp., Renton, Washington, currently is adding to its facilities as part of a continuing expansion of the company during the past two years from a one-man shop. In December a Baum 17½ x 22½" folder was being installed. Other equipment installed since April, 1954, includes an offset duplicator, an ATF Chief 22 offset press, camera and platemaking equipment, and a power cutter.

The company is specializing in catalogs and service and sales manuals. Thomas H. Cooke is president, and John R. Steveley is general manager. Mr. Stevely entered the corporation as treasurer January 1.

•

Humidification Booklet Out

"Humidification in the Printing Industry" a new booklet prepared by Bahnson Co., Winston-Salem, is ready for distribution to printers.

Technical material is given covering types of printing humidification problems and how they are solved. Free copies are available from The Bahnson Co., 1036 S. Marshall St., Winston-Salem, N. C.

Trade Events

National Assn. of Litho Clubs, annual convention, May 6 and 7, Schroeder Hotel, Milwaukee.

Technical Assn. of the Graphic Arts, annual meeting, Boston, May 9-11, 1955, Somerset Hotel.

Research & Engineering Council of the Graphic Arts Industry, annual meeting, Parker House, Boston, May 11-13.

Lithographers National Assn., annual convention, June 20-23, Lake Placid Club, Lake Placid, N. Y.

International Assn. of Printing House Craftsmen, annual convention, August 7-10, Netherland Plaza Hotel, Cincinnati.

National Assn. of Photo-Lithographers, annual convention and exhibits. September 21-24, Statler Hotel, Cleveland.

Packaging conference and exhibition, April 18-21, Chicago. Conference at Palmer House; exhibition at Chicago Amphitheatre. American Management Assn.

Southern Graphic Arts Assn., annual convention and exhibit, May 26-27. Hot Springs, Ark.

Litho Schools

CANADA—Ryerson Institute of Technology, School of Graphic Arts, 50 Gould St., Toronto, Ont., Canada.

CHICAGO—Chicago Lithographic Institute, Giessner House, 1800 S. Prairie Ave., Chicago 16, Ill.

CINCINNATI—Ohio Mechanics Institute, Cincinnati, Ohio.

LOS ANGELES—Los Angeles Trade Technical Junior College, 1646 S. Olive St., Los Angeles 15, Calif.

MINNEAPOLIS—Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis 3, Minn.

NASHVILLE—Southern School of Printing, 1514 South St., Nashville, Tenn.

NEW YORK—New York Trade School, Lithographic Department, 312 East 67 St., New York, N. Y.

OKLAHOMA—Oklahoma A & M Technical School, Graphic Arts Dept., Okmulgee, Okla.

ROCHESTER—Rochester Institute of Technology, Dept. of Publishing & Printing, 65 Plymouth Ave., South Rochester 8, N. Y.

PHILADELPHIA—Murrell Dobbins Vocational School, 22nd and Lehigh, Philadelphia, Pa.

PITTSBURGH—Carnegie Institute of Technology, Dept. of Printing Administration, Pittsburgh.

SAN FRANCISCO—City College of San Francisco, Ocean and Phelan Aves., Graphic Arts Department.

ST. LOUIS—David Ranken, Jr. School of Mechanical Trades, 4431 Finney St., St. Louis 8, Mo.

VANCOUVER—Clark College.

WEST VIRGINIA—W. Va. Institute of Technology, Montgomery, W. Va.

Trade Directory

Lithographic Tech. Foundation
Wade E. Griswold, Exec. Dir.
131 East 39 St., New York 16, N. Y.

National Association of Photo-Lithographers
Walter E. Soderstrom, Exec. V. P.
317 West 45 St., New York 36, N. Y.

Lithographers National Association
W. Floyd Maxwell, Exec. Dir.
420 Lexington Ave., New York 17, N. Y.

National Assn. of Litho Clubs
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5917 33rd St., N. W.
Washington 15, D. C.

Printing Industry of America
James R. Brackett, Gen. Mgr.
719 15th St., N. W. Washington 5, D. C.

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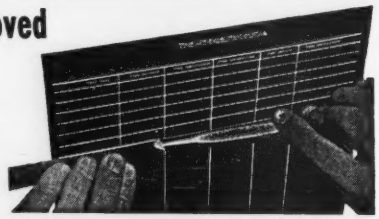

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LTF Publications Index Out

Copies of "General Index of Publications Issued by the Lithographic Technical Foundation" were distributed to members last month.

The 116-page volume has a cross reference of all LTF publications to date. Different subjects covered in the Skilled Craft Texts, Shop Manuals, Special Subject Texts and the LTF Research and Technical Publications are listed alphabetically. Each publication of the foundation bears a series number with the list at the end of the book.

A clear instructional foreword on the use of the index is included.

W. E. Griswold, executive director, LTF, said that the industry has been asking for an index for years and the publication should serve to cut down on correspondence and phone calls to the Foundation as well as make the Foundation's publications of more use in the plant.

•

Norder Named Sales Manager

Appointment of Harold Norder as sales manager of Wetzel Brothers, Milwaukee creative printers & lithographers, was announced Jan. 17 by Arthur A. Wetzel, president. Mr. Norder, who joined the firm in 1947, besides supervising local sales, will direct and coordinate activities for the company's four regional sales offices in Chicago, New York, Detroit, and San Francisco.

Norder is a past president of Graphic Arts Young Executives Club of Milwaukee, and is a member of Milwaukee-Racine Club of Printing House Craftsmen.

•

Research By-Laws Distributed

Members of the Research and Engineering Council, Graphic Arts Industry, Inc., received an up-to-date copy of the by-laws of the Council last month. The brochure, printed by offset in the United States and composed on the "Monophoto" in England, also details the development, organization and purposes of the Council.

Additional copies of the booklet may be obtained from Research and Engineering Council, Room 413, 719 15th Street, N.W., Washington 5, D.C.

S. & V.—Collie Make Agreement

Sinclair & Valentine Co., recently concluded an affiliation agreement with R. Collie & Co., Pty., Ltd. of Melbourne, Australia, largest manufacturers of printing inks and allied products in Australia with factories in Melbourne and Sydney.

Affiliation provides for continuing collaboration in the exchange of latest ink-making techniques.

Also included is an arrangement providing for orientation and training of Australian technicians at Sinclair & Valentine's New York laboratories.

M. J. Leckey, president, S. & V., stated that this agreement follows an arrangement recently concluded with the leading printing ink manufacturer of Japan.

Shown (l. to r.) are: Rudolph H. Bathmann, Sinclair & Valentine; John E. Gamble, R. Collie & Co., Pty., Ltd.; and M. J. Leckey, Sinclair & Valentine.

•

Kreutz Named 3M Manager

Advancement of Carl E. Kreutz to Los Angeles sales manager, printing products division, was announced last month by Minnesota Mining & Manufacturing Co.

Mr. Kreutz joined 3M in 1942 as a technician in raw material testing group. In 1950 he became a printing products salesman covering the West Coast area and became sales supervisor in 1953.

He will continue to make headquarters in Los Angeles and will be responsible for the sale of lithographic plates and "Spherekote" brand products.

•

Lithographers on Shippers Board

H. F. C. Brown, general traffic manager, Western Printing & Lithographing Co., Racine, and A . A. Wuchterl, traffic manager, Gugler Litho Co., Milwaukee, have been re-elected to membership on executive committee of Midwest Shippers Advisory Board, headquarters in Chicago.

•

Award Contest Extended

Mead Sales Co.'s Awards Contest for fine printing papers, is now being complemented by Mead's Wheelwright Monthly Awards Contest, open to all salesmen for authorized distributors of Wheelwright bristols, indexes, blanks, specialty covers and blotting papers.

This contest, which began Jan. 1, awards cash prizes to salesmen submitting the most outstanding specimens of printing on Wheelwright grades. Entries are judged on format, design, type selection, character of art and engravings, with special attention to presswork.

•

Barry Manager for Fraser

J. G. Conley, general sales manager, Fraser Paper, Ltd., announced appointment, effective Jan. 1, of Jack K. Barry as head of the company's new sales promotion department. O. H. Messecar succeeds Mr. Barry as the company's sales representative in the southeastern states and John J. O'Neil joins the Chicago division to assist in sales and sales promotion work.

•

Frye to Resign from GAF

Jack Frye, president of General Aniline & Film Corp., informed the Board of Directors at its regular monthly meeting in New York, Jan. 26, that he wishes to resign from the presidency and as a director, effective April 1, 1955, to devote attention to a new aviation development along with other interests.

•

Crown Builds Alabama Plant

Crown Cork & Seal Co. is building a new plant at Leeds, Ala., for production of metal closures for the bottling industry. Located in Birmingham's industrial district, the plant will fabricate, assemble and lithograph bottle caps for its customers and also lithograph tin plate for the parent company's Florida can manufacturing plants serving the citrus industry.

Is business good?

We hope so, and we hope it continues that way in 1955; but no matter how well you're doing, you can't afford to lose track of what's going on in this fast-changing industry. You can stay abreast of new products, new methods and new materials by reading MODERN LITHOGRAPHY every month. You can subscribe by sending $3 to us at BOX 31, CALDWELL, N. J. You'll get the next 12 issues. Or, save a buck and send $5 for two years.

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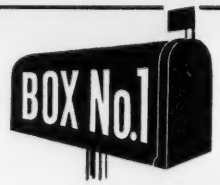

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Tale Ends

WHAT would you do if a fire broke out in your press room? Here's a short quiz that can tell you how well informed your employees are concerning fire safety. It appeared in a department news letter for employees of R. R. Donnelley & Sons Co., and was reprinted in the January News Letter of the National Safety Council's printing and publishing section. Fred Lubet, Council contact man for the section, suggests that it be tried on press room employees or supervisors.

1—Where is the closest fire extinguisher for your work station?

2—How many kinds of fire extinguishers are there in the pressroom?

3—What kind of extinguisher would you use on: (a) an electric motor fire? (b) an ink reservoir or fountain fire? (c) a rag fire? (d) a paper fire? (e) an ink solvent fire? (f) a press fire?

4—Where are the sprinkler head valves in your department located?

5—What should you do if a man's clothes caught fire?

6—What should you do if a press catches fire?

7—Where do you put empty extinguishers for refilling?

8—Who refills extinguishers and where is it done?

9—Who returns the filled extinguishers to their proper storage place?

10—How are carbon dioxide extinguishers checked for full charge?

★

An editor's judgement isn't so good, maybe, but we've got a handy nail file and comb set anyway, even though our guess in the Roll-O-Graphic contest at the NAPL convention was pretty wild. The offset supply company sent the kits out to all 800 contestants who estimated the number of square inches in a roll of Tri-Mol molleton. Robert Little, Wilmington Printing Co., Wilmington, N. C. won a $50 Savings Bond for coming closest.

★

Curtis Paper Co. reports that litho was the most widely used process among the winners of the December and the End of the Year printed specimen contests sponsored by the company. Lithographers who participated in the contest included E. L. Smith Printing Co., New York; Independent Lithograph Co., San Francisco; and John S. Stark Printing Co., St. Louis. Awards were given for specimens showing effective use of Curtis Papers for various jobs.

★

One of our ML readers in Toronto wants information on making keylines from any solid black and white letter. He understands that these keylines can be heavy or fine, or apply to the outside or inside of a letter. Can anyone help him out?

G. Deets

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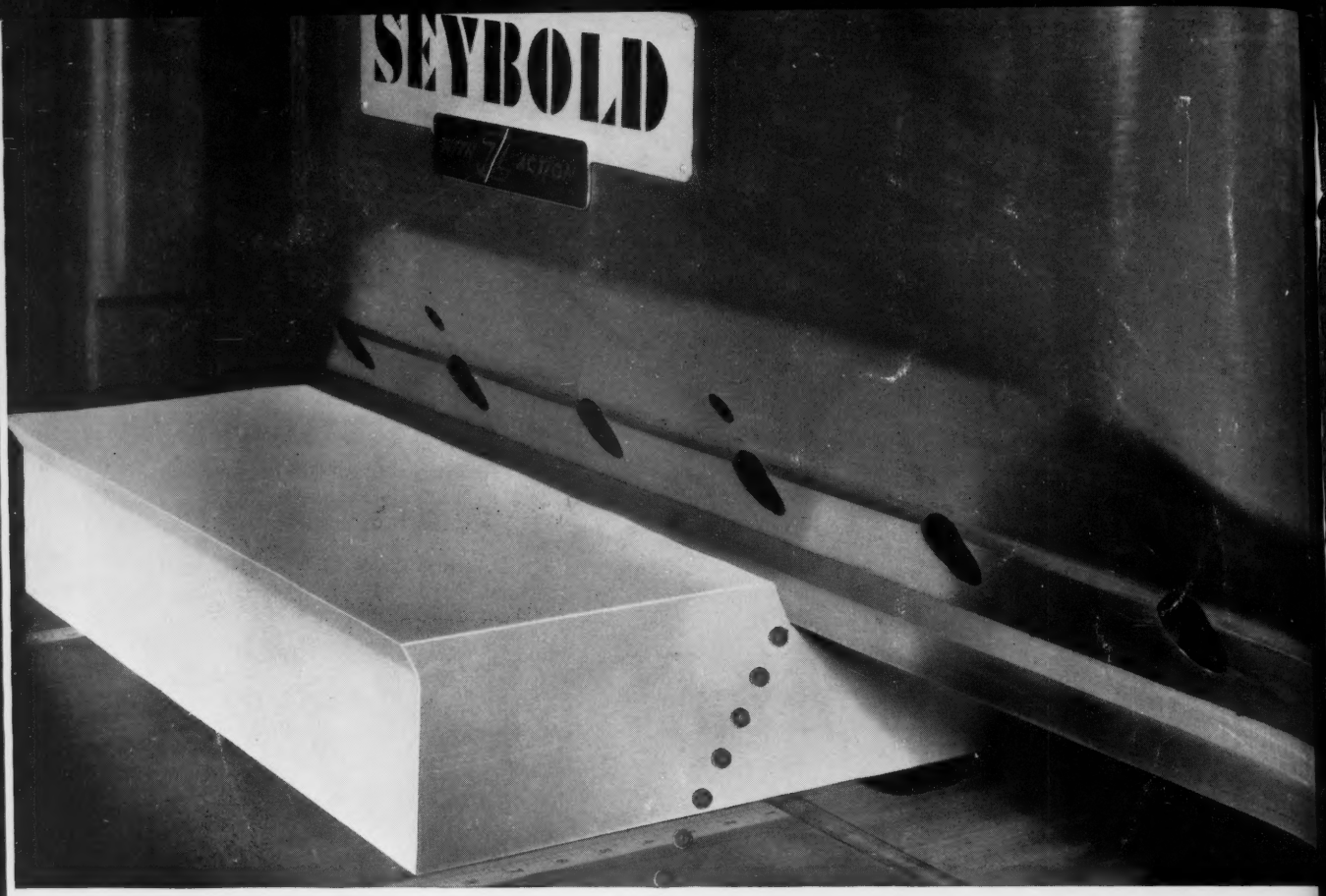

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